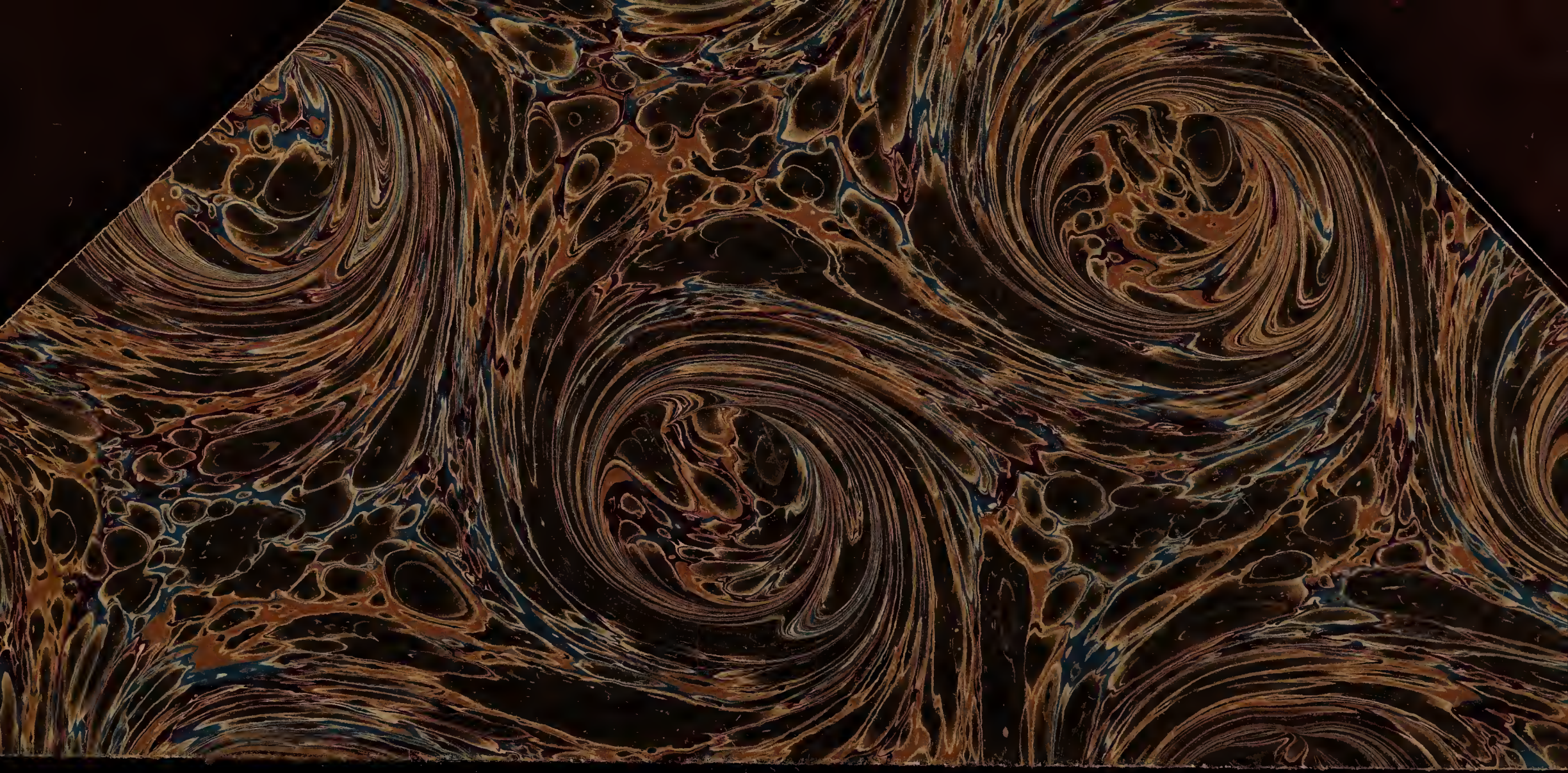

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THE
Practice of Physick,
Reduc'd to the Ancient Way of
OBSERVATIONS
Containing a Just Parallel between
The *Wisdom* and *Experience* of the *Ancients*,
AND
The *Hypotheſis's* of *Modern Physicians*.

INTERMIX'D
With many *PRACTICAL REMARKS*
upon most DISTEMPERS.

Together with Several
New and Curious *Dissertations*;
Particularly of the
TARANTULA,
And the Nature of its Poison:
Of the Use and Abuse of *Blistering-Plaisters*:
Of *Epidemical Apoplexies*, &c.

Written in Latine, *by* GEO. BAGLIVI, M. D.
Professor of Physick and Anatomy at Rome.

Opinionum Commenta delet dies, Naturæ judicia confirmat. Cic. de Nat. Deor.

London, Printed for *Andr. Bell*, *Ral. Smith*, *Dan. Midwinter*, *Tho. Leigh*, *Will. Hawes*, *Will. Davis*, *Geo. Strahan*, *Bern. Lintott*, *Fa. Round*, and *Jeff. Wale*, MDCCIV.

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Author's Preface.

TO form a right Judgment of Diſeaſes, is a very difficult Matter. The Science which teaches us to ſurmount that Difficulty, is the Subject of this Performance: And indeed if we conſider, that nothing is ſo conducive to the Perfection of this Science, as Experience, we can't think it ſtrange, that the neglecting or miſapplying of Experience, has ſo far multiplied the Number of Errors that over-run Phyſick in the Age we live in. Having lately finiſh'd the courſe of my Studies at *Naples*, and travel'd all along the Sea-coaſt of *Dalmatia*, I was fond of nothing ſo much as viſiting the Schools of *Italy*, and trying what paſs they had brought the Practice of Phyſick to, after ſo great a Noiſe of New Diſcoveries. But upon a diligent Survey of 'em all, I found Phyſick unſpeakably born down and ruin'd with the Licentiouſneſs of Opinion, and my Countrymen ſtrangely degenerate from their primitive Wiſdom.

For in ſome Univerſities, I found they

had such an invincible Aversion to the Opinions of the Ancients, that they thought it a piece of Meanness and Disparagement, to spend either Time or Pains in perusing the Writings of the *Galenists*. Upon this Apprehension, they tortur'd and rack'd their Wits, to invent some new and unheard of thing; and if they did but light on any such Business, they glory'd in the Invention, and plac'd a Pride in thus serving the Republick of Physick. In other Universities I found 'em so Religiously devoted to the Theorems of the Ancients, that they incessantly attack'd even the excellent and useful Discoveries of Modern Authors; and throwing all Diseases into one Mould, admitted of no other means of Cure, but Bleeding, Purging and Blistering. Nay, in all of 'em, there was nothing to be seen, but eternal Wrangling among the Professors of Physick; and either an indiscreet forwardness for the minting of Novelties, or a stubborn Bigotry in adhering to false Opinions that maintain'd their Ground by Anticipation: And, which is worst of all, these Professors aspers'd and expos'd their Mother Science and the Mistress of their Studies, as being an uncertain Juggle; and that not only in their private Interviews, but openly and in Books expos'd to publick view. So great is the consequence of this their Indiscretion

diſcretion, and ſo heavy is the Detriment that accrues from thence, both to Phyſick it ſelf and the Profeſſors of it, that this Prince of Sciences, which was always eſteem'd by Perſons of the higheſt Dignity, and Rul'd even Kings themſelves with a Soveraign Sway, is now deſpis'd in many Places, and forced to yield a precedency to the meaneſt and even the moſt pernicious Arts.

Being thus ſurrounded with an infinite Variety of Opinions, I was at a loſs to make a juſt choice; but at laſt I came to a firm Reſolution of ſiding with none, and of purſuing the Truth with Vigour and Diligence, without any other Guide but Reaſon and Experience. In purſuance of this Reſolve, I ſpent no ſmall time in taking exact and minute Obſervations of Diſeaſes; and was quickly ſenſible that by this means I made a greater Progreſs in Phyſick in a few Months, than I had done before in ſo many Years; and that nothing is truer than that old Saying of *Manilius*; *Artem Experientia fecit, Exemplo monſtrante viam.* Theſe Remarks of mine were firſt careleſly committed to Writing, only for the ſake of my own Memory; afterwards I drew 'em out into Claſſes and Heads, and in that condition they came into the Hands of my Friends, who thereupon preſs'd me very earneſtly

earneſtly to publiſh 'em. For my own part, I was ſo conſcious of my own Inſufficiency, and ſo ſenſible, that a Phyſician unguarded with the Authority of Grey Hairs and advanced Years, is commonly deſpis'd; theſe Conſiderations, I ſay, had ſo much influence upon me, that I had fully reſolved to deny their Requeſt, and ſtand the ſhocks of even Violence it ſelf: But at laſt my Reluctancy was overcome by the Authority and Weight of many of the greateſt Men, whoſe Names I here forbear to mention, for fear of undergoing the Cenſure of Oſtentation and Vain Glory. 'Twill be ſufficient, ſure, to mention only four of 'em, who are Men beyond the reach of Exception, and in whoſe Teſtimony the World will readily confide: I mean, the Learned and Reverend Prelate *Ferdinandus Nuzzius*, a Man of unparallel'd Merit, and born for greater things: *Luke Tozzius* preſent Phyſician to his Holineſs, and a Perſon of noted Excellency; The Reverend Father *Valla*, Apoſtolical Preacher of the Jeſuits, who goes as far beyond *Laurentius*, as a Conſummate Knowledge of Divine and Humane Things is above Grammar: And *Paul Stufa*, the Abbot, diſtinguiſh'd not only by his Noble Birth, but by a familiar acquaintedneſs with *Greek* and *Latine* Letters, and a thorough-pac'd Knowledge of the Law.

Before

Before I take leave, I have one Requeſt to make to the Reader, That he'd vouchſafe to pardon my troubleſome and almoſt impertinent Zeal, in recommending and inforcing the neceſſity of imitating Nature and Experience, and in expoſing the Vanity of Hypotheſis's and Syſtems. For in bewailing the deplorable Calamity of the Profeſſion, I thought it neceſſary, ſince I could not argue nimbly, at leaſt to inculate with a pathetick and repeated Regret the only Remedy that's left. For ſince the whole Plot of Phyſick lies in collating Diſeaſe with Diſeaſe, Time with Time, and Man with Man; ſince it lies in diſtinguiſhing the imminent and growing Symptoms with peculiar Signs and Names, and allotting 'em proper and ſeaſonable Remedies: Queſtionleſs we can't do better Service, both for the Imbelliſhment of our Profeſſion, and the Health of Mankind, than to influence the Students of our moſt Noble Science, to have an attentive regard to the Obſervations made by our Anceſtors in the earlier Days of Antiquity, and be careful in forming new ones of their own. Had this courſe been conſtantly purſued from the Age of *Hippocrates*, down to the Age we live in, the Progreſs and Improvement of Phyſick had been unſpeakable by this time. How that neceſſary and handſome Method, ſo happi-

ly begun by our Anceſtors, has been ſince diſcontinued, and chang'd for Diſputes, and idle Logomachies; I can aſſign no other reaſon but the Juſt Judgment of God. Who can think otherwiſe, that does but caſt his Eyes on the State of Things in theſe our Days? Days, in which all other Sciences and Arts not only ſhine in their primitive Splendour, but receive additional Imbelliſhments every Hour; while the Practice of Phyſick alone, by I know not what fatal Miſchance, lies moſt of it in the Duſt; and, which is yet more grating, grows every Day meaner and more deſpicable in the Eyes of the unlearned Vulgar. This growing Contempt, I take it, is chiefly owing to the Phyſicians, their deſpiſing the Obſervations upon which the Noble Science is rear'd, and addicting themſelves intirely to Syſtems and Hypotheſis's; their being ſo ſollicitous, not ſo much to diſcern and cure Diſeaſes, as to aſſign 'em handſome and ſpecious Reaſons; by which means it comes to paſs, that to the infinite diſgrace of Phyſick, and the irrepairable detriment of Mankind, they take their Meaſures not from the ſafe and certain Rules of the Art, but from the Whims of their own Brain.

In the mean time, I would not have any one imagine that I ſet about this Work with a Proſpect of Vain-glory, and a deſign

ſign of purchaſing the noiſie Applauſe of the World: For there's nothing I ſtudy ſo much as to wean my ſelf from the Allurements and Decoys of this Life, by keeping in view the inſtability of Mortal things, and the certainty of eternal Life.

Nullis nota Quiritibus
Ætas, per tacitum fluat.
Sic, cum tranſierint mei,
Nullo cum ſtrepitu, dies,
Plebeius moriar Senex.
Illi mors gravis incubat,
Qui notus nimis omnibus,
Ignotus moritur ſibi.

Senec. Trag. Thyæſt. Act. 2.

The only Inducement I had to undertake this Province, was the love of Truth, and a deſire of promoting the Publick Good. I leave it to the Judgment of the Wiſe and the Good, to determine what Service I have here done. For my own part, 'tis ſufficient that what I am able to perform, is conſecrated to the Publick Good, and in a particular manner to the Benefit and Safety of the Citizens of *Rome*.

Rome Febr. 29. 1696.

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OF THE *Practice of Physick.*

BOOK I.

CHAP. I.

Of the absolute necessity of Observations in the way of Physick.

CAUTIONS.

I.

A Physician is the Minister and Interpreter of Nature: let him contrive or do what he will, unless he obeys Nature, he cannot govern her: For the Springs and Causes of Diseases lye far beyond the reach of humane Reason; and oftentimes Nature commences a new Work, when our Efforts are at an end.

II.

A judicious Soul, instructed by Observations of long standing, compasses the most Soveraign way of Curing Men; especially if to these Qualifications it adds the Reading of Books. But unless it be very cautious in the perusal of Books, 'tis to be fear'd that what is propos'd for the improvement of Knowledge and Learning, may furnish fresh occasions of Errour.

III.

Hippocrates, the Prince of Physicians, speaks in the Words of Nature, rather than those of Man. His perfection in the way of Physick was such, that the Ages of Antiquity have not produc'd his equal, and in succeeding Ages he will not be parallel'd; unless Physicians return to their Understanding, and being rous'd as it were, from a deep Sleep, perceive what a vast difference there is between the Historical and Masculine Physick of the *Grecians*, and the Speculative sorry Advances of later Upstarts; unless they give less Credit to imaginary Opinions, and conclude, that *Medicine* ought not to be confin'd to the narrow Limits of our Reason, but on the contrary, ought to be recall'd from these streights, to the open field of Nature.

IV.

Whatever it is that distinguishes the Modern Theory from the ancient Ignorance, 'tis all owing to the Experimental Philosophy of this Age.

Age. But in order to enlarge the publick Good, by vertue of the Labours of private Men; the Men of this Age ought to use their utmost Efforts in the same way to arrive at a perfect Knowledge of Practice, which is the Capital thing of the whole Art. By this means, we shall not only lay aside the Opinions and Prejudices that have been long settled in our Minds, but likewise carry the Art of *Medicine*, from a state of Infancy and Ignorance to an adult and wise Constitution.

V.

The Moderns, should not be oppos'd to the Ancients; but united with them, by a perpetual League, as much as may be: For what can be more indiscreet, than to make 'em disagree in Words, when they agree upon the Matter? 'Tis strange, how much this Lechery of Coining new Words, retards a young Student in the midst of a successful Progress, and clouds his Notions. The Difference arising from a prospect of Equivocal Words, makes him oftentimes doubt where he is, or which Course he should take in the Cure of Diseases: Nay, oftentimes he falls foul upon some Mistake, and either Deceives or is Deceiv'd under the appearance of Truth or Probability. As for the sick Patients, they are not concern'd, whether you call the Effects of Diseases and the Principles of an animate Body, by the simple and unpolite Names of the Ancients, provided you are perfectly well vers'd in the true Methods of Cure, and can make your Words pass into Deeds, and the event answerable to your Promises.

VI.

There's nothing that takes the Mind more off from the Knowledge of Diseases, than the boundless pursuit of Speculation and Disputes, that the *Arabian* Physicians, and the *Galenists* that came after 'em, have so licentiously Encourag'd even in the Practice it self. They over-look'd the Fertile and far extended Fields of Nature, where such eminent Genius's might have had a freer range, and chose rather to throw themselves among the Thorns and Trifles of the Dialecticks; in which, being long entangled, they never rais'd their Mind to the hopes of new Inventions.

VII.

Physick, is not the effect of human Invention, but the product of Time: For what the Ancients once believ'd of Divination, may justly be said of it, *viz.* that it sprung from such things as long use had approv'd. It may be defin'd thus: A Faculty apprehending and perceiving the several Kinds of Diseases, and explaining them by such things as it has observ'd and taken notice of for a long treact of Time, as being signs of the Event; and exhibiting Remedies against 'em, not in persuance of any probable Hypothesis, but according to the prescriptions of the Divine Art, warranted by frequent use. If this way of Curing be compar'd with the Splendour, Height and Magnificence of the *Hypothetick* Way, it will perhaps appear mean and even contemptible. But after all, the

the other has nothing that's Healthy or Vital; but only a wonderful Luxuriancy of Branches and Trees, which indeed are lovely to the Sight, but presently fade, as soon as the luster of Novelty has forsaken 'em. But this we now speak of, does not consist of Fictitious and Fabulous Things; it does not propose to it self Ostentation or vain Glory, but pursues only the true solid Glory, that lies in recovreing the Health of Men; 'tis not Calculated for making a shew of its Flowers, but for bringing forth great plenty of the most pleasant Fruits; so that it enlarges its growth every day, and acquires new Vigour in its progress.

VIII.

These Men speak Prudently and Considerately, who assert, that *that* part of our Science, which lays too great stress upon Speculations, has no true proper Relation to the Art of Physick: For the Art is made up of such things as are fully Survey'd, and plainly Understood, and of such perceptions as are not under the controul of Opinion. It gives certain Reasons which are plac'd in due Order, and chalks out certain Paths, to keep its Sons from going astray. Now what is more uncertain than the *Hypotheses*, that at this day we take so much delight in? Have they any thing else, for the most part, than meer Conjectures, which by their Similitude lead us to various and sometimes contrary Conclusions. The Excellent Art, which owes its Birth to a diligent, accurate, and judicious Observation of Nature, does not consist in the keenness of human Reason; but ought

rather to be call'd, the Wisdom that's heap'd up in the various Labours of the Learned of all Ages, and the Judgments of many Men winded up as 'twere into one.

IX.

'Twould be equally tedious and unnecessary, to relate the many and great Mischiefs that have accru'd to Physick, from the ardent and eager pursuit of new Hypotheses. I shall only instance in two things: In the first place, the most pregnant Genius's, when once tainted with these learned and ingenious Fables, are for the most part not only unwilling, but asham'd to condescend to the grosser pieces of Knowledge; I mean to observe the Qualities of Diseases, and the Vertues of Medicines, and to try their Properties. In the next place, those Students who are possess'd with these feign'd and fabulous Opinions, make them so familiar by use and diligence, that afterwards in practising Physick, they make use of 'em not for probabilities, as they did at first, but as certain.

X.

We have hitherto bestow'd too much pains upon the Ingenious Hypothesis's of the Physicks, and the subtile Divisions and Definitions of Logick. Tho' our Art is illustrated by these, it does not depend upon 'em. Nature is its own Master, and lies more extended than to be confin'd within certain bounds prescrib'd by our scanty Reason. Corporeal things are govern'd by an admirable eternal and constant Rule. So that if we mean really

really to do Mankind Service, and not to put upon 'em, we must of necessity have Nature's Laws in our View, meditate and make our Observations upon 'em, and Obey them to a nicety.

XI.

'Twas not Vanity, or an Itch after popular Fame, that mov'd me to publish this little piece; but a design of pointing out the Road, and in some measure fortifying it, to many of my equals, that are wandering up and down. I am not Ignorant that many will Censure the Performance, such as 'tis. Some will Ridicule me for being daub'd over with Galenical Filth, and cry out that I have return'd like a Dog to the Vomit, and like a Hog to the Puddle. Others will brand me for an Empirick; or at least will charge me with Confidence and Precipitancy, in offering to make head against the unanimous consent of all the Moderns. But the love of Truth, which from my Infancy has ever accompany'd me, and the advantage of promoting the publick Good, has inspir'd me with a contempt of these and such like Objections. For I should have been asham'd, if that Ancient Maxim, *Utilitate hominum nil debet esse homini Antiquius*, should have more influence upon the Heathen Sages, than upon a Christian Philosopher.

XII.

Those who oppose Reason to Experience, whether Empiricks or Rational Physicians, seem to me to be all Mad: For how can we make Reason to act all the Parts of a Science,

that, as all wise Men ought to acknowledge, is acquir'd by Tryal and Use continu'd thro' a long progress of Time? And on the other hand, why should Experience be only regarded, and Reason turn'd out of doors? Here, by *Reason*, I do not mean that Power of the Mind, which hunts after the obscure Parts of Nature, and is call'd *Invention*; for that belongs to *Physicks*. I understand that Queen Reason, that is plac'd above all the rest, by which a Physicians looks into the Principles and Causes of Diseases, foretells their progress and event, and gathers Futurities from what's present. Pray God these Controversies and Disputes among Physicians may, for the great interest of Mankind, especially of Christendom, be laid aside; so that *Physick*, which for so many Ages has been miserably toss'd, may repose in the quiet harbour of Tranquility and Concord.

CHAP. II.

The Original, the Progress, and the certain Part of Physick; are owing for the most part to Observations.

SECT. I.

NEcessity gave being to Physick, and Experience brought it to Perfection. In its Infancy 'twas gross and stupid; but in the progress of Time, by the daily accession of new Observations, which mutually illustrated one another,

nother, and especially by the Light of Reason, which over-rul'd and moderated all, it became Liberal and Learned.

II.

The old Proverb, *Lapides ad filum, non vero filum ad lapides regere,* may be pattly apply'd to the Physicians, who ought to model all their Reasonings, which are as 'twere the Stones with which *Medicine* is built, according to the Thread or Line of created Things; for since the Line of Objects, which God has immutably stretch'd thro' the World, can't be bow'd or slack'd so as to be adapted to our Fallacies, 'tis necessary that the Ratiocination of Men should yield and be directed by this Line.

III.

The two chief Pillars of Physick, are *Reason* and *Observation*: But Observation is the Thread to which Reason must point. Every Disease has, not a fictitious, but a certain and peculiar Nature, as well as certain and peculiar Principles, Increase, State and Declination. Now, as all these are brought about independently of the Mind, so in tracing their Nature we have no occasion for a subtile and disguis'd way of Disputing, but only for a repeated and diligent Observation of what happens to the several sick Persons, and such an acuteness of Mind as is conformable and obedient to Nature's Measures.

IV

IV.

It happens not unfrequently that the Event does not answer the Physician's Expectation, tho' supported by Reason, and Experience; and that, not out of any defect in the Rules of this excellent Art; but either from the multiplicity and the almost incredible Number of concurring Causes, both Internal and External, or rather from the Negligence and Mistakes of the Patient, Nurses or Physician, in a faulty regulation of the Circumstances of the Cure.

V.

Many ascribe all to Reason, and nothing to Experience; and many again are on the opposite side. Now both sides are equally Criminal; whence sprung so many Divisions among Physicians, and such jarrings between the Theory and Practice. We are, and for ever will be, ignorant of the Minute subtile Texutre of the solid as well as the fluid parts of a living Body, which is altogether out of the reach not only of our Senses, but even of Reason. Experience likewise unconducted by Reason is oftentimes fallacious: For which cause they will equally prove sources of Error, unless they mutually illustrate one another.

VI.

Tho' we are altogether ignorant, wherein the disorder of every Part and the Nature of every Disease consists; yet we observe that each of 'em has

has its own form, *i. e.* certain measures of Decreasing and Increasing, or constant and determin'd Periods. That 'tis so, will manifestly appear, if we allow Nature to act of her own accord, and do not interrupt her by improper Administrations. When it happens otherwise, 'tis the Method of Cure and not Nature that causes it. For two Patients seiz'd with a Plurisie, (for instance) and treated different ways, by two different Physicians, will likewise have different Symptoms: So that if there be an Error in the Method of Cure, the Physician, and not the Disease, will be the Author of many Symptoms.

VII.

If we compare *Hippocrates*'s Aphorisms, Prognosticks, *&c.* with the Observations of later Authors, we shall plainly see that the Nature of Diseases is the same now as it was in former Ages, and that their Periods observe the same order as formerly. From all these Premisses we may justly conclude, That Physick is not so uncertain, nor grounded upon such a slight Foundation, as 'tis commonly thought; but built upon certain Rules, confirm'd by repeated Experience: For the Observations which make the principal part of the Art, have the human Body for their Subject; the Motions of which, whether Natural or Sickly, have a stable Spring, and regular and constant Periods: So that the Advances of Medicine, being grounded upon such Observations, cannot but be certain and perpetual.

VIII.

VIII.

Hippocrates being fully sensible of this, made it his whole Business to make just and diligent Observations; by the assistance of which he discover'd, that diseases have some Constant and Peculiar, or individual Affections, and some Adventitious and Common to others. The Constant sort depend upon the very individual and constant Nature of the Disease. The Adventitious spring either from the various Methods of Cure, or from the manifold and various Concourse of Causes. The first of these he drew up in Aphorisms and Precepts, as being the Rules of the Art. The others he would not own for Precepts; but at the same time thought 'em not Contemptible, and left 'em to the Judgment of a good Man, *i. e.* an acute and prudent Physician.

IX.

These constant Qualities, which might be call'd the Characteristick Signs of Diseases, are sometimes manifest and obvious to our Senses, and sometimes obscure, and such as we can hardly assign a probable Reason for. But let them be of what Nature soever, a Physician ought not to contemn them, but to mark 'em down faithfully with the same very Simplicity that they appear in. For as Indications of Cure are drawn from the least Circumstance, so all the Minute, and even the obscure Motions of Diseases ought to be trac'd and described. By this Means, we shall have not only an absolute and

and perfect History of Diseases; but, even the Method of Cure, which is of greater Moment.

X.

'Twere tedious to recount all the obscure Motions that use to be observ'd in the curing of Diseases: But to set the matter in a clearer Light, we shall take notice of a few. To this Class belongs the Doctrine of Critical Days, or of the despumation of the morbifick Matter, perfected in a determin'd Time of a Fever; importing that acute Diseases terminate luckily in an odd Number of Days, and fatally in an even Number; and that Chronical Distempers terminate in an even Number, both of Days and Months, as the Ancients observ'd. Of the same kind are the occult Permutations of Diseases among themselves, their Translation to one part rather than another, and the occult consent of Parts among themselves. Some secret Consent or Sympathy is observd between the Legs and the Breast, and between the Breast and the Privities. Inveterate Ulcers, Cauteries, and other Disorders of the Legs, unseasonably or imprudently Cur'd, turn to pernicious Disorders of the Breast, as it appears from daily Experience. In the Diseases of the Breast, Diureticks and Washes for the Feet are useful, and Purgatives are commonly prejudicial. We have seen all the Pleuritick Patients recover, that are seiz'd with a pain and subsequent suppuration in the inner parts of the Ear. Intermitting Fevers, that yield to no Digestives, Solutives or *Febrifuga*, are frequently Cur'd very happily by Bleeding in the *Salvatella*. A dry Cough is taken off by a violent pain falling up-

on

on the Testicles. *Conf.* 2. *Epid. Sect.* 5. When the Testicle swells by a Cough, it recalls the Memory of the Society of the Breast, Dugs, Testicles, and the Organs of Voice. *Conf.* 2. *Epid. Sect.* 1. If a Cough follows upon an Inflamation of the Testicles, the Inflamation Ceases, and *e contra*. *Conf.* 2. *Epid. Sect.* 1. A Dropsie of the Breast insues upon the Discussion of a *Hydrocele*. *Mear. Obs. Med.* When Sneezing precedes or follows Diseases of the Lungs, 'tis an ill Omen. *Conf.* 2. *Epid. Cap.* 9. Some periods of Diseases have likewise somewhat of a secret Sympathy, as well as the Exacerbations that return at set Hours, pursuant to the Observations we have made in several Pains, as well as in Fevers and several other Diseases.

XI.

When the Modern Physicians hear of these and a great many other things of the like Nature, they Laugh at 'em; and when they observe them, they Slight 'em, to the great prejudice of their Patients. Many things that surpass our Comprehension are not to be contemn'd; but 'twould be a piece of Wisdom, while we cannot canvass their true Nature by Reasoning, diligently to take notice of the effects that appear outwardly, and from thence to form Precepts in order to Practice. For when the Human Reason Despairs, or is not sufficient for the unravelling of Difficulties, it uses to waste it self in giving a probable Reason for 'em, and spend its strength upon superfluous Things: Or, to speak in the Words of *Sir Franc. Bac. Fol.* 293. "When once Men despair of finding the Truth,

"every

"every thing about 'em Languishes; whence it "comes to pass that they rather turn aside to "pleasant Disputations, and some superficial "Views of things, than stand up in the way of "a severe Enquiry". When Reason therefore is Blind in such difficult Matters, we ought to make Observations, and propose 'em to the Reader without any Disguises of Speculation; as *Asclepiadorus* in former times is said to have Painted happily without Colours.

XII.

From what has been said, 'tis manifest, that not only the Original of *Medicine*, but whatever solid Knowledge 'tis entituled to, is chiefly deriv'd from Experience. As for the peculiar Cure of any Disease, as I take it, it will seldom succeed well, unless Reason be join'd to Observation: For the innumerable Causes of Diseases, the various Temperaments of Patients, the difference of Age, Sex, way of Living and Climate, the various Seasons of Years, and an infinity of other things that concurr towards the production or removal of Diseases; these, I say, do oftentimes so perplex and disturb the certain and constant Nature of the Disease and its Symptoms, that 'tis a hard matter to trace the Truth, unless the Complexion of them all be weigh'd and illustrated by a discreet use of Reason.

CHAP.

CHAP. III.

Of the Impediments that have hitherto slackened the Diligence of Physicians, in making Observations.

SECT. I.

Supposing the foregoing advances to be true, or at least likely; It remains now to enquire into the Causes, that have hinder'd the Practice of Physick to arrive at its due maturity and perfection by the means of such a pursuit of Observations. As I take it, the chief Impediments that have slacken'd the Diligence of Physicians in making Observations, and by consequence have retarded the progress of the Practice it self, are these. The false Idols of Physicians, or the prepossession of false Opinions. A false kind of Analogies or faulty Similitudes. The preposterous reading of Books, and the fatal Itch of making Systems: And the Intermitting of the Aphoristical Way of treating Diseases. To set this matter in a clearer Light, we shall examine each of these heads in peculiar Chapters. Several other Causes might be added to these above mention'd, particularly the preposterous Methods of teaching Sciences: For since our Mind, when disengag'd from preconceiv'd Opinions, is first of all subjected to our Preceptors, if it happens that they proceed Immethodically, or are tainted with Errors, or are dull injudicious Men; all these Infirmities being transfus'd to us, are so deeply

deeply rooted in our Minds, that their Impression can never be defac'd, unless we be directed by the best Teachers or by Experience it self to the right way of Truth, and so unlearn all such things as have been the first and chiefest source of our Errors.

II.

Our innate temperaments do oftentimes oblige us to embrace Error, and make false Judgments of things. Besides the Authority of *Galen* in his Book, *Quod animi mores corporis temperiem sequantur*; daily experience vouches for this Truth: Many Men otherwise Sagacious and Learned are inslav'd to some Opinions, the falsity of which is obvious to the most ignorant: Being drawn upon 'em by a Natural byas of their Mind, they not only take 'em to be certain, but even cannot be took off from 'em by the most evident Reasons. This is manifest in the practice of some Physicians: One that is naturally Timorous and Melancolick, or Possess'd, as the saying is, of a Frigid and humid Temperament, do s by the natural Habit of his Mind avoid Spirituous Volatile Med'cines, or such as operate with a forcible Motion; and attempts to Cure all Diseases by such Remedies as are Moistening, Refrigerateing, apt to pacifie the humours, and in a word, that are less Active. On the other hand, a Physician of a hot bilious, fierce or impatient Temperament, neglects the gentler and cooling Med'cines, and insists upon Volatile Spirituous Remedies, Aromatick Alcali's, Iron, Fire, Vesicatories, violent Purgatives, and such things

as operate with the greatest force and activity. Now as their natural Inclination makes 'em prefer one sort of Med'cines to another; so it recommends to 'em some Precepts and Opinions rather than others, and sometimes this their Inclination is the standard by which they judge of Sciences. Wherefore if they do not take care to check that Inclination by attentive Meditation, and know how to make right Reason a directory for the inward Motions of their Constitution, they will be very obnoxious to the abovemention'd Errors and several others.

III.

Among the sources of innumerable and pernicious Errors, this is not the least that Men give more Credit to the useless comments of their own Brains, than to Observation and the Cautions of Nature. And indeed while I consider that Nature is not subject to our controul, and that she performs her Motions in so occult a manner, that they can never be so easily trac'd as by Observation, and Reason retaining to Observation: And on the other hand, that Men talk of her as 'twere at pleasure by a certain impulse of the Mind; while I have these Considerations in View, I do not think it strange that false conclusions ensue thereupon; and that the Cure of Diseases, grounded upon such conclusions, do's not answer Expectation; but I wonder that the Errors springing from them should be attributed to the inconstancy and incertainty of the Art, and not to these preposterous ways of Argumentation and Speculation. By this means it came to pass, that

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at this day many charge Physick with uncertainty, others deride the Doctrine of Prognosticks, others prescribe Remedies in a tumultuary promiscuous way at any time of the Disease, observing no Rules for Concoction or Crisis; a great many slight the Ancients, and give too much Credit to the Moderns, and a great many give no Credit to either. While they will not subject their own Humility to the Humility and simplicity of Nature; but form judgments of her effects by arrogant Theories, and imitate her by a sort of Jest; 'tis no wonder that being thusprepossest with Errors, relating to the Cure of Diseases, they do not Kill, but Nourish 'em, and rather exchange than stifle 'em. These and a great many other impediments of the Practice of Physick might be drawn up; but I purposely wave em, lest this Treatise should prove bulky and tedious to the Reader. 'Twill suffice therefore to take notice of the following heads, which bear the greatest Figure.

CHAP. IV.

IMPEDIMENT I.

The Derision of Ancient Physicians.

'TIS equally unworthy of a Man of Learning and Probity, and pernicious both to the Republick and to the progress of Letters, to deride the noted Performances of others, or indeed any Essay towards the promoting of Sciences. This is most notorious among the Me-

dicinal Tribe: For the greatest part of their Writers, for almost these forty Years, have made it their Business to deride the documents of the ancient Physicians. And 'tis incredible how pernicious that has prov'd both to the Science and to the Lives of their Patients. Those who gave the first vent to this Error, I take to be *Helmont* and *Paracelsus*, who in order to raise their own Sect upon the ruines of the *Galenick*, not only charg'd *Galen* and almost all the Ancients with Error and Ignorance, but lash'd 'em with Calumnies and Tawnts, in their Medicinal Writings. This Crime of Derision did not confine it self to these two Authors, but began to spread every Day, especially among their Followers, with whom 'tis still so much in vogue, that their chiefest Study is to accomodate their Discourses, not to the Nature of things, but to the Affections of their Minds; so that their Opinions are not Modell'd by right Reason, but by the Byas of their Mind.

II.

Neither could those who mean'd to make themselves famous by new Hypothesis's minted in this Age, abstain from deriding the Ancients, and that perhaps for the same Reason that determin'd the former. The new Hypothesis's having their respective Followers, these thro' the influence of Faction and a customary Derision, have thrown many Aspersions upon the Ancients, whom they either never Read or never Understood. However, 'tis no matter whether these things proceeded from the foregoing or from private Causes; while 'tis certain

certain that many Disadvantages have sprung from thence. The cheif Disadvantage is, that when the derider do's not judge of things impartially, but according to the prejudices he has imbib'd, with reference to the precepts concerning the cure of Diseases, which are fully explain'd in the writings of the Ancients; in that case he must needs take them to be either false or useless, and so rob the Patients of the Advantage they might reap from 'em. Besides, they confide so much in their own Hypotheses and Opinions, that tis almost below 'em to condescend to Experience; or if they do, they either imitate Nature by their own Jests or make an unseasonable leap from a few scraps of Experience to general Axioms: And from these rather than from *Phænomena* diligently observ'd, they draw Arguments concluding upon the hidden Cause. I pass over a great many inconveniencies of this Nature, accrueing to Physicians and the Science they profess, and much more to the sick Persons, from that scandalous Crime of Derision; which are all obvious to any Man that Reasons Justly and Sincerely.

III.

To speak more particularly of the Ancients, I reckon 'em much worthier of Praise than of Dirision and Calumny: For, besides that, they laid the first Foundation of the most Excellent Art; they have weigh'd and examin'd the Nature of every Disease so diligently, and enrich'd the true Practice with such valuable accessions, that we have but small hopes left of ever going beyond their sublime Performances. Tho'

some of the *Galenicks* are too ready to fall in with less constant and uncertain Theories, yet the whole School of the Ancients ought not to be promiscuously charg'd with Ignorance and Folly: For the *Galenicks* of former Ages had some Plea to be somewhat addicted to these Theories, in order to humour the Genius of the Age in which they flourish'd, as well as the barbarous Comments of the *Arabians*; especially considering that the Springs of the *Grecian* Medicine with which the Physicians water'd their Grounds, were thro' the silence of so many Years, either quite dry'd up or corrupted by Sophistical Additions. But even in those very Times, many of 'em seeing through the inconstancy of their Theory, bent all their Thoughts upon the Diagnosticks, Prognosticks, and Cure of Diseases, *i. e.* upon solid Practice; and what noble progress they made in this Design, is sufficiently manifest, from the incomparable Cures and Rules, with which they have adorn'd their Books. Now the Moderns shew so much malignity in Detracting from these great Men, that they are not asham'd to expose not only their Theory, but even their Practice, to open Dirision; and being every day harden'd in this Opinion, they choose rather to Err along with those of whom they have conceiv'd a good but false Opinion, than to be wise with Men of Learning, of whom they have not so good an Opinion. They run down *Galen* very unjustly, and throw such impudent Reflections upon him, as if he had been the worst and unjustest of all the Men that either now are, or ever were: To do this, and at the same time to cry up the Moderns in one

place

place for Gods, and in another place for Princes of the Sciences, is not the part of a prudent Man, or one that judges justly. Let me therefore earnestly intreat Physicians hereafter equally to peruse the Modern and Ancient Authors, and to mind nothing more in the perusal than their Rules and Cautions, the approv'd Remedies, and such like solid Things, which are perpetual, and of some Use and Vertue in this our common Sea of Mortality: As for the other things which are more abstracted, and will never profit any Body, I would have 'em entirely overlook'd, and set apart for popular Sermons.

CHAP. V.

IMPEDIMENT II.

The false Idols of Physicians, or the Prejudice of false Opinions.

SECT. I.

THE third stop of the Practice of Physick, is the false Idols with which a great part of Physicians, especially in this Age, are Enchanted; and acting up to their Measures distracts and clouds the Sense of the Soul and of Nature; by which means it comes to pass that Judgments are not form'd in conformity to right Reason, but pursuant to the prejudices of the Mind. Out of so great a croud of

Idols, the following which occurs to my Memory, shall suffice. A great many have such an Affection to some one Remedy, that they think it alone entitul'd to a Sovereign Vertue and Power of Curing almost all Diseases; either by reason of a lucky event observ'd once or twice to ensue upon the use of it, or rather by reason of a certain innate propensity that they have not only of crying up some Medicines, but of ascribing 'em Fictitious Vertues. We see some Physicians recommend Milk and Whey in all Diseases; others spirituous and volatile Remedies; others Acids and Alkalies, and others again Purgation and Bleeding. In fine, every Physician crys up a great many particular Remedies of this Nature according to his own Genius or the Accidents of his first Practice; and imprudently throws away the rest tho' never so much Approv'd and Beneficial. Some are mighty Favourers of some Theoretick or practical Proposition, which they have either suck'd from Books or invented themselves; and model all the Rules of the Cure of Diseases by that Proposition. 'Twere in vain to spend time in mustering up all the erroneous Advances of this Nature; since they are obvious to any one that seriously considers the Performances of the Moderns, who have almost sunk the Practice of Physick, by following that Maxim of minding only a few things and pronouncing accordingly.

II.

Many Physicians of this Age reckon Bleeding, Blistering, Purging and other *Galenick* Remedies, at once superfluous and pernicious. This puny Thought was first launch'd by *Helmont*, and having made various illusions in the straits of an inconsiderate and interrupted Experience, has gain'd a wonderful ascendant in the Minds of the Moderns, who being fond of Novelty, rail very haughtily, and to the infinite loss of their Patients, against the use of such Remedies. Others take all Diseases to spring from an Acid, and pretend to Cure 'em by Alcaline Remedies; this way of Cure being the easiest of all, and apt to be learn'd in a few days, by every silly old Woman, do's at present prevail beyond the others. But the Physicians that are ignorant of the *Hypocratick* Maxim, that there are a hundred things that injure a Man, seem by that Method of Cure rather to form Conjectures upon Diseases, than to make any certain Discovery; of which more largely hereafter. Some are wont to exhibit a Purge in the beginning of all Diseases, in order, say they, to carry down the preceding Matter that feeds the next. Many Physicians do stedfastly adhere to this munky advance that was hatch'd in the Schools of *Abraham*; and to take 'em off of that Opinion, neither the repeated Observations of the Ancients, with reference to the Season of Purgation, nor the very Example of the divine old Gentleman, who never used Purgatives in the beginning of Diseases, but when the matter was Turgescent, are of any

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avail But in earnest, Purgatives being apt to renew the Fermentation, do sometimes by a concealed Heat, actuate the crude Matter that was formerly lock'd up in Retreats: And by that Means do either exasperate or duplicate Fevers or recal them when they are upon the point of going off.

III.

Among the apish Advances that impose very much upon Physicians, we must reckon in that of those who imagine, that no Man can arrive at the perfect Knowledge of Practice, without a previous Acquaintance with other Sciences, namely, Logick, Mathematicks, the various Idioms of Languages, Rhetorick, Astronomy, *&c.* the Knowledge of which, and a great many other things of the like Nature, would indeed prove a considerable Ornament to the Profession of Physick; but in my Opinion, they are as conducive to a circumstantial and exact History of Diseases, as the Art of Painting is to a Musician: For Experience justifies, that the old *Galenicks* who were scarce acquainted with the Latin Tongue, could Cure Diseases as happily as those who are given out for the greatest Masters of Sciences, that have no tendency to the Cure of Diseases. This Custom introduced in latter-Times, has given Rise to several Absurdities in the way of Physick; especially this. That the spending a great part of time in the Acquisition of the above mentioned Sciences, leaves but a insufficient Portion of Time for the first Elements of Practice: Besides, these

Physi-

Physicians boast of their being Astrologers, Poets, Criticks, Historians, Philosophers, Men well versed in the Greek and Hebrew Languages, *&c.* But when they are privately called to give an Account of what our Ancient Oracle leads to, I mean the Knowledge of our selves, the Arguments they offer are jejune and useless. For this and several other Reasons being render'd uncapable of compassing a solid Practice by the help of Observation, they presently learn the Idea of some general Hypothesis, and attempt the Cure of all Diseases by general Propositions some Theoretical and some Practical. Now these things are only like Apparitions in the Surfaces of things, swimming as 'twere and struggling in the Waters and 'tis no wonder if they at first view screw up their hopes, and afterwards disappoint them.

IV.

But to proceed more regularly in pursuance of this Argument, we must distinguish the History of Diseases, or the *Medicina Prima*, from the Cure of Diseases, or the *Medicina secunda*. The History of Diseases is a particular Science of a peculiar Form, which does not owe its Principles or Improvement to other Sciences, but to the purest and most sovereign Fountains of Nature; by Vertue of which, it is entituled to Perspicuity and Fidelity: Or to speak more plainly, the whole History of Diseases depends upon a diligent and patient Description of all such things as the Learned Observator has mark'd down concerning the Invasion, Progress

and

and Exit of Diseases, and committed to writing, with the same simplicity and sincerity that he us'd in observing them, without adding any thing of his own, or of the Doctrines of Books and other Sciences. Now, the Infancy of Physick, which owes its first Nourishment to the History of Diseases, cannot be confounded and tyed up to the Rules of other Sciences, without demolishing the very Foundations of the Divine Art it self: In effect, all that part called the *Medicina Prima*, which is the Basis of the *Medicina Secunda* or Curative Part, ought to be treated of, so as that it be derived from the true Nature of things, and not from the Nature of our Thoughts, as many have done: I mean, that its Improvement must not be carried on by Arrogance and Pride, but by various Labours, by a patient Enquiry, and an anxious and cautious Fidelity in making Observations.

V.

As for the *Medicina secunda*, or the *Curative* part, I must needs own, that it may be illustrated in several points by the knowledge of other Sciences; especially those which bear any affinity to Physick, or are look'd upon as retainers to it. Such are Chymistry, Botany, the Doctrine of Diet, Exercise and the six not Natural things, Experimental Philosophy, Anatomy, and other things of that Nature which contribute very much towards the perfection of *Method*, and a ready view of the Indications of Cure, even upon the minutest circumstances. For Method being, as 'twere, the Architecture of the Physical Structure, and the Basis of

Cures

Cures, cannot be compleat, unless its parts be mutually perfected by the means pointed to in these Sciences; and so joyntly conspire in an Unity of Truth and Nature. As for the other Sciences, which are not at all related to Physick, I shall not deny but that the ways of thinking may be improv'd, and the Office of a professor adorn'd, by the Study of the athematicks, which our Countryman *Martinus Ghetaldus* has accurately pursued in his learned performances, *de compositione & resolutione Mathematica*, and his *Appollonius Redivivus*. To these we may add the Knowledge of Meteors, Astronomy, Eloquence or the Art of perswading, Moral Philosophy, especially that part of it which treats of the forming of a Man's Manners, and the acquisition of Prudence, which is so necessary to a Physician, *&c.* But in regard they have no tendency to the Curing of humane Bodies, they are only to be pursued at leisure Hours in order to divert and unbend the Mind. For as either the Body or the Mind is weakned and wore out by over-struggling, so they are mightly refreshed and corroborated by a seasonable rest and relaxation.

VI.

They are much mistaken who think they can cure Diseases happily, because they are Masters of the Theory; for a Physician ought to have much higher things in his view, in order to clear the innocent Art from the Calumnies it lyes under, and restore the Sick to a healthy State. He must dissect the Bodies of those who dye of Distempers, and foul his Finges,

to

to the end he may find out the seat of the Malady, the Cause, and the issue of antecedent Symptoms, and in fine the event of all the effects taken notice of in the foregoing Desease. The sick Persons Excrements and Urine, his Tongue and his Eyes, his Pulse and his Face, the Affections of his Mind, his former way of living, and the errors he has been guilty of in the way of Conduct and such other circumstances ought to be diligently considered, in order to trace the genuine and natural Diagnosticks and Prognosticks of Diseases, and the indications of Cure. To frequent or boast of splendid Closets, to heap up great Numbers of Books without using 'em, to make a Figure at Universities, and have a name celebrated in the Modern Journals of the Learned; this, I say, will contribute nothing towards the appeasing of the pain of Diseases. But that end will be effectually compass'd, if you frequently visit the Publick Hospitals and the nasty Beds of the Sick, and with an Austere fearless patience observe what good or ill happens in the several Periods of the Disease, how the symptoms make their progress, and what event follows the administration of such and such Remedies; whether the present Disease is turn'd into one of another Form; what Benignity, Malignity, Vehemence, *&c.* appears in the Disease and in it symptoms thro' all their Periods, what Method of Cure is found to be standing and perpetual for each Distemper. I say 'twill be of infinite use to make observations of these and a thousand such things which have a more intimate relation to Nature, and rather distinguish than split and rend its parts.

VII.

VII.

The desire of vain Glory, has in all Ages put Physicians rather upon the forming of Sects, than the daily discovery of new Phænomena's, to illustrate and confirm the History of Diseases. Thus they've moulded the Nature of things at pleasure; and almost overturn'd it with their indigested Meditations. And upon that score 'tis no wonder that the patrimonial fund of Med'cines is impoverish'd, and its flourishing State disturb'd by a multitude of useless Books. The followers of those who instituted Sects, being misled by a vain Reverence, or scar'd by Lazyness from the trouble of a narrow enquiry, chose rather to affect the fame of a subtile Interpreter, a nimble Antagonist, or a Methodical Abridger, than to fix the Diagnosticks, Prognosticks, and Cure of Diseases upon their own Observations. In a word, they acted the parts of a Master and an Auditor, and not those of an Inventor and the Person that adds to what is already invented.

VIII.

Of the Preceps for Life and Manners, those are the best which are publick and common, and universally acknowledg'd by all Sectaries, whether Peripateticks, Academicks, Stoicks or Cynicks. The Physicians of this Age, ought to mind that saying of *Seneca*'s concerning Manners; for the Precepts of Practice that they give out now adays, are neither General nor Common to each Sect, namely, the Galenical,

Chy-

mical, Mechanical, *&c.* (as *Hippocrates*'s Works are) but are cheifly confin'd to particulars, and not confirm'd by any History or matter of Fact. When they see a thing succeed once, they fancy 'twill always be equally successful; but the process of time giving them a fuller View of the Matter, they find it to be uncertain, and confin'd to a particular Case, instead of being Universal and Perpetual. The modern Paradoxes, the mutual Animosities of the late Physicians, the Number of Books which those of our Family have indiscreetly Published concerning the uncertainty of Physick: These, I say, are full Proof, that the Rules of modern Practice are not general, or confirm'd by a full Convocation of Physicians, but contriv'd at every one's Pleasure, either out of Hatred to an opposite Sect, or the love of their own, it being Customary among 'em to defend and promote the Glory of their respective Sects with all their Prowess; or else they are contriv'd thro' a want Sense and Thought, or a croud of Prejudices, or an Affectatation of novelty, which in this Age has been foolishly coveted; or the false Influence of Precepts, and triffling Books, or thro' the Contempt of a Neighbouring Physician *&c.* So that we can never have any great Hopes of the increase of Physick, till all its Sons joyn into one Family.

IX.

Ignorant Physicians are oftentimes impos'd upon, by the abusive Accusation of a fictitious sort of Malignity in Diseases. They do not imploy their Diligence in tracing the Antecedent

dent Causes, Symptoms, and whole State of the Disease; and by that means commit great Errors in the way of Cure, which exasperate the Disease, that of it self was mild and gentle; and upon that, they impute the Exasperation to a certain latent Malignity, that in my Mind is merely Fictitious. In the mean time, they cannot tell where the Nature of that Malignity lies, and so e'en Acquiesce in the Popular Opinion, that the Malignity of the Humours must be attacked by Alexipharmacal and Heating Med'cines, and thrown out by Sweating. But after copious Sweats, this Malignity is sometimes so far from being removed, that the Latent Inflammations of the *Viscera*, which for the most part are the Genuine Cause of such Fevers, are thereby increased, and the Patient's Illness is inflam'd. Some later Physicians, after a narrower Enquiry into the Accidents, accompanying the Feavers that are commonly call'd Malignant, have discover'd, that all of them do chiefly depend upon a double Cause, namely, the Coagulation and Dissolution of the Humours: And the Method of Cure must be altered, pursuant to the Variety of this preternatural State of the Humours. As Cordials, Spirituous, and heating Med'cines, are convenient for Malignant Fevers arising from a Coagulation, so they are highly Pernicious in those which proceed from a Dissolution; in which Case the Temperate Acids, the Emulsions of Seeds, the Gellies of Harts-Horn, and such like moderating things are only proper, for curbing that dissolving and almost inflammatory State of Blood. Now, since the above mentioned Med'cines operate by a manifest Quality, inabling

them to Dissolve or Moderate; I hope none will deny, that such Fevers are like-ways produced by a manifest Cause. So that the fictitious Notion of Malignity tumbles down of its self. But after all, I don't deny, but that there are some Fevers which are truly Malignant, being produced by an Air and Humour allyed to Poyson, and scarce perceivable by our Senses, such as that which takes rise from the deprav'd Qualities and Influences of the Air, corrupt Food, poysonous Animals, and such other Causes. But that sort of Fevers is very unfrequent, and not near so common as most Physicians imagine. I pass over a great many other Prejudices that impose upon Physicians and cramp true Practice, least I shou'd tire the Reader, or fall upon Tautologies.

CHAP. VI.

OBSTACLE III.

False Simile's, or a false sort of Analogies.

SECT. I.

AS Arguments drawn from Similitudes are the easiest, so they are the most apt to draw fallacious Conclusions, unless they be very Regular and Just. And the Impatience that Physicians shew in their Enquiries, is manifestly owing to nothing so much as the false Similitudes, that they encourage so much, both in curing Diseases, and in forming a Judgment of them. A Similitude that concludes Perfectly, ought

ought to relate only to things that fall under one *Genus*, as to Plants and Plants, Minerals and Minerals, Animals and Animals, *&c.* so that all the several Attributes of one thing may be verified of the other to which it is compar'd: For otherwise, the Conclusion will be imperfect for want of a sufficient Enumeration of the Parts, and from thence mighty Errors will spring up. If any one shou'd compare *Alexander Farnesius* to *Cæsar*, the Comparison wou'd be Just, for they were both Men, and both of them Great Generals in their Time; and the Attributes of the one, are exactly suitable to those of the other. But if he shou'd Assimilate *Farnesius* to the Sun, the Similitude wou'd be extravagant, and too far fetch'd; for that the Attributes of the Sun, cannot be absolutely verified of *Farnesius*. Now this is the true State of the Similitudes, us'd commonly in Physick.

II.

Those who argue by way of Analogy from the Anatomy of Insects to that of Brutes, and from this to the Anatomy of Men, are excellent Philosophers, for as much as the Terms of the Similitude are all confin'd under the *Genus* of *Viventia*, and after a sufficient enumeration of the parts, the Attributes of the one are exactly answerable to those of the other, so that the Anatomical Observations made upon Brutes have not only given great light to those made upon human Bodies, but are exactly of a piece with them. Nay so certain and constant is that mutual Analogy, that from thence the circulation of the Blood, the structure of the *Viscera*, and

an infinity of other things have been discover'd, to the great happiness of the Age we live in. In like manner, those who Argue from the Mechanicks and upon divers Rules of the Mathematicks, relating to the *Staticks*, *Hydraulicks*, the force of Heavy Bodies, *&c.* conclude upon the structure of a living Body; these I say reason Justly, because the humanBody is calculated by Number, Weight and Measure, not only as to its structure, but as to the effects that depend upon it. Such was the will of the Supream Creator of the Universe, who to subject the Body to the easier sway of the Mind, seems to have drawn the most regular series of Proportions and Motions in the human Body, by the sole Pencil of the Mathematicks. Since the Analogical Argumentation of Anatomy and Mechanicks, has a great relation to the Cure of Diseases, and concludes with more certainty than the other *Hypotheses*; 'tis certain that the Famous *Tozzius & Borelli* at *Naples*, and *Bellini* at *Florence* could not have done better service to our tottering Theory, than by applying Anatomico-Mechanical Rules in explaining the Effects of Diseases: Upon which head their learned performances deserve to be read, the Writing of which has contributed so much to the Glory of our Country and profession, and the benefit of sick Persons. But those who reason from the effects of Minerals in a chymical Furnace, to the effects observed in the Body of an Animal, do not only conclude in a lame imperfect way, , but give occasion in a Flaming degree to those pernicious Errors, which unjustly disturb our Modern Physick: their Conclusions wou'd be juster, if by the *Anatomia Infusoria*

they

they threw in Chymical or Vegetable Liquors into the Humours of living Animals, and made their remarks upon the effects arising from such Mixtures,

III.

'Twere tedious to give in a list of all the false and almost popular Similitudes, made use of by our modern Physicians in the Cure of Diseases. How pernicious was that Similitude which *Helmontius* first invented, in order to dissuade the vulgar People from Bloodletting. The Simile I speak of was this; As Water boyling in a Kettle can't be cool'd by the taking away of the boyling Water, but by the removal of the Fire underneath, so in a Feverish ebullition of the Blood bleeding will not lessen the Heat, and that end will only be compass'd by the Evacuation of the Morbifick cause, by Sweat and other ways. At first View this seems to be a compleat Similitude, but for as much as it ranges beyond the Sphere of the mutual *prædicatum*, it leads Practitioners to great Errors. For, to pass by all other reasons, our Feverish Flame is mixt and exactly united to the Blood, and not put under the Veins like Fire under a Kettle; so that when part of the Blood is removed, the Febrile Flame is at the same time likewise impair'd. However, tho' the Solid Arguments of Mechanicks and experience advise us to a prudent use of bleeding in Fevers; yet we do not recommend it in all Fevers, but only in such as threaten great evils, by reason of an overboyling of the Blood, or too great a Quantity of it, or the

commencement of a stagnation in any Bowel. The Fatal Symptoms ensuing upon these Causes and prevented by Bleeding, are chiefly, Deliriums, Watchings, Inflammations of the *Viscera*, Anxiety of the Breast, Difficulty of Breathing, stopping of the Liquids that circulate in any *Viscus*, breaking of the Vessels and a thousand such like Accidents. Nor does Blood-letting only suppress the above mention'd Accidents, but likewise reduces the boyling Mass of the Blood to such a Mediocrity of Motion, as is sufficient for a seasonable depuration and secretion of the peccant Matter.

IV.

The same *Helmontius* has invented another Similitude that's equally lyable to the same difficulties. 'Tis this. As a Fever occasioned by a Thorn in the Finger can't be extinguish'd without pulling out the Thorn, so all other Fevers will never be cur'd, unless the Thorn of the peccant Matter that irritates the vital Spirits, be carried off immediately by Diaphoreticks, Purgatives, *&c.* without expecting any concoction. Now, besides that there are a great many Fevers, that are not produced by such a sensible Thorn of peccant Matter, particularly those which take their rise from Anger, Venery, Passions of the Mind, *&c.* These Diureticks, and Purgatives exhibited in the beginning of acute Diseases in order to throw out that imaginary *Spina*, have no other effect than that of robbing the blood of its serous part that dilutes and tempers it, and so disposing it for Coagulations and more fatal Ebullitions. Hence 'tis no wonder, what we see every day, the symptoms of acute Fevers and the

the Fevers themselves are, to the infinite danger of the Patient, exasperated after an unseasonable use of Diaphoreticks and Purgatives. The other Similitudes so familiar to Physicians in the Explication and cure of Diseases, are lyable to these and other Difficulties. Such is the Similitude of the Heat of things that Putrifie in Moisture, with respect to the heat of Fevers, which the *Galenists* falsly supposed to take their rise from putrifying Humours; but that opinion being sufficiently confuted and exploded by the Moderns, I pass it over in silence. Add to this the Similitude of the Head of an Alembick converting the vapours to Water by its refrigerating Vertue, made use of in explaining a Catarrh, which was thought to be occasion'd by the refrigerated Brain, its converting the vapours that ascend from the *Viscera* into a tough pituitous Humour: The Similitude of the Brain suppressing the Spirits by its Frigidity, and so causing sleep: The Similitude of the vulgar Suctions, Attractions, and Excretions, brought in upon the explication of the natural effects of a living Body. These and an infinity of other popular Simile's are much esteem'd by ignorant Physicians, who calculate the cure of Diseases not by Dogmatick Laws drawn from Nature's storehouse, but by the measures of some fictitious or imperfect Similitude, after the manner abovemention'd.

V.

Tho I have hitherto given an ill character of the abuse accruing from fictitious Simile's, continued down from the Ages of Barbarity to this

we live in: Yet I would not have any one to think, that I condemn the use of arguing by way of Analogy or Similitude; but only that I want to see 'em manag'd with more Judgment, especially, when the cure of Diseases is regulated by 'em. For all the discoveries of natural and experimental Philosophy, and even Medicine it self, for this last Age, are owing to Analogy and Induction, not such as I disprov'd in the foregoing Examples, but such as is perform'd by an entire enumeration of the parts, and confirm'd by a long and manifest Series of Experiments, and which affords general Axioms collected from it, like the whole from its parts, which give a perpetual Stability to the truth of the Science, and chalk out a sure and constant Method of Practice, rendring the Practitioners steddy and fearless in fixing the cure of Diseases: So that Analogical Arguments are better calculated, than all the other ways of arguing, for improving the Arts comprehended under the natural Science, especially Medicine; partly because Analogy is a retainer to Nature and as 'twere mix'd with it, and partly because it discovers the transition of Opinions into Errour more manifestly, than the other Species of Arguments.

CHAP.

CHAP VII.

OBSTACLE IV.

The Prepostrous reading of Books.

SECT. I.

ONe will never make any Progress by the reading of Books, unless he first fixes upon a Method of Reading. A tumultuary and inconsidera e w ay of Reading, accompany'd with an insatiable Desire, do's but cloud the Mind: but when 'tis seasonable and considerate, and attended by the Conversation of learned Men and the Use of Experiments, it becomes fertile and useful. For as over-feeding do's not improve Health, neither do's insatiable Reading enlarge solid Knowledge. And 'tis for this reason, that those who consider but a few things with Prudence, not only judge more perfectly of things, but give their Sense of them with greater readiness and facility. I own that we owe a great deal of our Improvement to Books; but before we can reap from them any plentiful and compleat Benefit, we must be a long time diligent in discovering and surmounting the Errors that Authors are usually liable to, and with which they taint our Minds, and seduce 'em from the Paths of Truth. By the reading of good Books we are quickly benefited; but by the perusal of sorry ones we unlearn instead of Learning.

II.

As for my part, I do not mention this, as if I meant to give Laws to Mankind, with reference to the reading of Books. My View is to take notice of some Errors, that frequently fall in the way of those, who apply themselves to the perusal of Books in a preposterous manner, and without due Caution; for this is a source of infinite Inconveniences, accruing not only to the Readers, but to the Sciences. Some read in a tumultuary confus'd way, others with a contradicting Humour, and others again forgetting their Liberty, cling to the Opinions of Authors like inchanted Rocks, taking their Nod for Reason, their Orders for Laws, and their Responses for Oracles. But to come to the matter it self.

III.

Those who apply themselves to several Sciences at the same time, are wont to form their Judgments of one by the Precepts and Rules of another, especially that in which they take most Pleasure: Thus, among the Ancients, *Aristotle* form'd his Assertions of natural things from the Doctrine of *Dialectick*, and *Plato* took his Measures upon the same head from abstracted and theological Idæa's, as *Proclus* and his Associates did from the Rules of Mathematicks. Physicians, in like manner, are wont to covet the Knowledge of other Sciences besides that of the cure of Diseases, and if they happen to pursue one of these Sciences with too much Eagerness, they presently judge of Practice, and the cure of Dis-

eases

eaſes, not according to the regular rules of Practice, but according to thoſe of the beloved Science, which they cry up, not in private only, but in Writings expoſed to the publick View, as being highly neceſſary towards the carrying on of the cures of Diſeaſes. Whether this Vice is to be imputed to the Age, or to the Authors I ſhall not determine: But 'tis certain that a'moſt all the Phyſicians of this Age are taintedwith it, and that it has brought the Sciences into great diſorder. Upon this View, *Cardilucius* in the Preface to his Practice inveighs ſomewhat warmly againſt the Anatomiſts, for pretending that the cutting of the ſmall Fibres is ſo neceſſary for reaching the Hiſtory and cure of Diſeaſes; whereas, as he ſays, after the ſpending of theſe laſt fifty Years in Anatomical diſſections, the Hiſtory of Diſeaſes is not more exact, nor their Cures more Solid, than before. As *Cardilucius* cenſures the Anatomiſts for raiſing ſuch high pretences upon the Diſſections of minute things; ſo 'tis obſervable that the Chymiſts have regulated the Hiſtory of Diſeaſes by a few experiments taken from the Furnace, the Coiners of new Syſtemes by their Sophiſms and new minted Words, and the Mathematicians by Circles and Lines. But I leave it to the Learned to Judge what the effect of that may be.

IV.

Farther, Thoſe who read Books, uſe to employ their Memory more than their Reaſon; they ſeem chiefly to aim at the Learning what this or that Author advances, and are altogether Ignorant what Sentiments they ought to form to themſelves upon the bottom of their own

own Experience. If we look a little narrowly into the Writings of some of our modern Authors, we'll find, that they value themselves upon a long Genealogy of new Opinions, and a medley of various Colours but not upon any design of making new Discoveries, or confirming former Inventions. Now, I cannot assign any other Reason for this, but that incredible Inclination for Reading and almost Dying upon Books; or rather their Laziness in never using their own Reason, or consulting Experience. And hence it comes to pass, that the more they read, the more confus'd they are in their Sentiments of things; and their Confusion throws them headlong either into Scepticism or Madness. For since the Capacity of the Brain is not Infinite, 'tis no wonder that the innumerable Impressions of Idæa's are mutually confounded, and take the Mind off from just and distinct Judgment; by which means Men coming to a disuse of their own Thoughts, contract an Impotency of ever using them. This sort of Men, who imploy their Memory more than their Reason, use to be of a stately supercilious Temper, and are apt to arrogate to themselves a right of determining every thing: And indeed nothing less can be expected of 'em; for that false sort of memorial Knowledge (if I may so call it) puffs up the Mind, and entitles them to a sort of shining Quality, with which they are wont to anticipate those who mean to oppose them, especially if it is accompany'd with an imperious Boldness, and a formal Gravity of Speech.

V.

There are a great many Men in the World, that imploy their Neighbours Strength and not their own in their enquiries after Truth. In the common Actions of Life, they always make use of their own Eyes; but in tracing the Nature of Diseases, they seldom or never have recourse to their own Reason. A peaceable Assent to a probable Thing, and a want of Skill in making Experiments or forming just Judgments, which many Physicians have contracted for want of that sort of Exercise from their Youth; this, I say, keeps many at a great Distance from the Knowledge of the Truth. These Men confound Truth with Antiquity, and Falshood with Novelty. New, and even True Discoveries they brand as false, and cry up the falsest of the Ancient Assertions for Truth. The Circulation of the Blood, the Discovery of the Lacteal and Lymphatick Vessels, the Structure and Use of the Nerves and *Viscera*, and a great many other modern Discoveries confirm'd by the constant Voice of Nature; even these, they stand not to Censure and Abuse, and that for no other Reason, but because they are new. On the other hand, the Rottenness of the Humours, the Sanguification-Office in the Liver, the Authority of the first Qualities in producing and curing Diseases, and the other Opinions of the Ancients, which for several Ages have rendered Ineffectual the noble Efforts of a great many for enriching the medicinal Field, and have tainted their Minds with false Prejudices; These they

keep

keep close to, because they pleas'd the Ancients, and claim a Title of Antiquity.

VI.

Farther: The same very Men are such great Admirers of the Ancients, and account 'em so Praise-worthy in all kinds of Arts, that they think we have no room left for Inventions, nor no ground to hope for any Improvement. But their Mistake is sufficiently made out by the present Age, which has gone beyond all the Ages within the Records of Time, in the Glory and Multitude of Imventions: Nay, the steddyness of Nature in her Operations is further evidence for this purpose; for by an immutable eternal Course she displays an admirable Constancy and Equality in all her Offices; so that I cannot understand how it should come to pass, that this Age should produce a Generation of Men more dull in the way of Invention, or slower in their Apprehensions, than those of former times. But the matter lyes here: 'Tis not the Genius's and Judgments of Men that are grown Old, but their Industry and Application; for the force and edge of the Mind is only broke by Idleness; and old Age that overtakes every thing else, has no influence upon the Genius, which is fortifyed by the strongest and almost immortal Bonds of Nature. Now, if we understand this aright, 'twill plainly follow, that the edge of our Apprehension is not only equal to what the Ancients had, but wou'd far exceed it if it were but whetted by Exercise; and that Antiquity or Novelty do's not raise the value of things,

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so that the Ancients are rather to be imitated than superstitiously admir'd. Not that I have any Prejudice against the Thoughts of the Ancients, or mean to depreciate them upon a Point that has procur'd 'em so much Glory: For as I have all along followed their unequal'd Industry in enriching the Practice of Physick, so I am infinitely sorry that in these times we are fallen into such Straits, that being destitute of the Supports in which the former Ages abounded, we are at a loss to know how to promote the Art of curing Men. And tho' many of the Ancients draw a Curtain before the Eyes of their Readers, yet their Writings have some scatter'd Sparks, which, if carefully observ'd, would set their Precepts in a clear Light.

VII.

But least any of the ignorant Tribe, should falsely charge me with the disswading of young Men from so useful and laudable an Exercise, as the reading of Books; I think my self oblig'd in this place to confess Ingenuously, that, as I owe to the reading of Books some Progress in the way of Physick, which, tho' small, is not hurtful; so I shall ever exhort and encourage young Men to pnrsue and cultivate the same Study. However, that they may avoid those Sands upon which I have oftentimes necessarily struck, I think it proper to give them a few preparatory Cautions. In order to reap a speedy and compleat Advantage by the reading of Books, they should always read the approv'd Authors; and if there's one approv'd beyond all the rest they should never want him out of their Hands,

Hands, as containing the Sum of all that Wisdom, which they'll scarce ever find in a hundred Authors of an inferior Character. For a Proof of this, let's pitch upon the learned *Sanctorius*, who by his Golden but small Treatise *de Medicina Statica*, has done more Service to the common Interest of Mankind, than a thousand other Authors in a thousand Volumes, who by pilfering from one another, and so running as 'twere in a Circle, have expos'd to the publick View a deplorable plenty of Words, rather than any eternal Monument of their Industry. You cannot profit by reading, without you understand what you read; and what you understand, you must not give your Assent to it, till you consider whether 'tis true or false. Make use of your own Reason in resolving the Questions you see prefix'd in the Titles of Books, and by joyning Experience to your assiduous Reading, endeavour to make a just Judgment of every particular. For unless Reason directs your Studies, Study will not only fail in perfecting your Reason, but will blunt it, and seduce it from the right scope of your Labours. To dwell upon Books till one is almost dead and languishing, speaks a specious and empty Lazyness; to abuse them in a softer way, signifies Ostentation and Ignorance: For 'tis well known that Letters perfect Nature, and 'tis equally known that Letters are perfected by Experience; and when they enjoyn some general things, unless these be determin'd by Experience, we shall never compass the wish'd for End. 'Tis manifest from Experience, that those who Die as 'twere upon the reading of Books, become stupid and unqualified for all the

other

other Actions of Life; nay, that is not all, by reason of their perpetual Abstraction from things, and the Confusion of their Idea's occasion'd by over-reading, they are uncapable to serve either themselves or the Common-wealth. On the other hand, a great many Men that have read but very little, have always been esteem'd and admir'd by Men, because they form'd their Thoughts and Judgments of things with Prudence and Sagacity. When you find your self indispos'd for Study, that is, when you have not a chearfull Desire and Inclination for't, abstain from it at that time; for tho' you then read a great deal, you'll get but little by't. Wherefore, that such a Space of time may not be spent in vain, imploy it either in conversing with learned Men, or making Experiments.

VIII.

Your cunning Men use to despise Letters, and simple Folks admire 'em; but prudent Men take the middle way, and only use 'em in so far as the Publick or private necessity requires. To read Books with a design of contradicting, or for an external Ornament, or to assent to all their Precepts promiscuously without any Examination, speaks an Affectation of Knowledge rather than true and solid Wisdom. For as much as the whole Practice of Physick is couch'd in Cautions and Precepts confirm'd by long Experience, and these are apt to slip out of one's Memory unless they be carefully fix'd in it; 'twill therefore be proper for a young Student to have by him a Manuscript divided according to the Titles of the most remarkable things, under which, he may mark down the Sentences

of greatest Moment that he meets with in Books, and which he may always be reading over at his leisure Hours; by which means these Sentences and Precepts being more firmly riveted in his Memory, will improve and perfect the Mind, so that he will intrepidly go about even the most difficult Cures of Diseases. The writings of approv'd Authors Ancient or Modern, which treat of nice Subjects, are not only to be read once, but over and over again, and always consulted; so that our Mind may be as 'twere new model'd according to their Pattern. Authors of lesser Note are only to be read here and there; or if they're read over, it must be without dwelling long upon 'em, or losing much time. And as for the Books of the lowest Form, we ought to read 'em only in Epitome's drawn up by a fellow Student or an Amanuensis. By this means we shall acquire an extensive Knowledge of Sciences and Learning without any great loss of time and health. In the mean time, let's consider of what use the reading of Books is, to those who are already imbarqued in the Practice of Physick.

IX.

No Age ever produc'd such plenty of Medicinal Books as this we live in; and yet none is so deficient in Practical Observations. If we take a careful view of some of these Authours, we'll perceive either a nauseous repetition of things said before, or an excessive Ostentation of novelty, or an indiscreet mixture of Ancient and Modern Advances; and we'll find that more

of

of the discouse is spent upon contention and difference, than upon the tryal of new things. An Author of a new Book, who perhaps has but a small Stock of Reasons to back his Assertion, is not affraid to censure and depreciate all the reasons that others tho' Men of Learning have produc'd in confirmation of the same Position. This he do's to enlarge the weight and Authority of his own Advances. If from those Books you lop off the festival and exotical Inscriptions, the Philology, citations of Authours Ornaments of discourse, Fallacies, Superstition and such other vain Accoutrements, you'll leave but little behind; nay instead of the true Treasures of Wisdom, you'll find nothing but shadows and Chimera's. Since therefore the assistance of Books do's but little service in determining a Compleat and standing History of Diseases, we must pass to those things which have a closer coherence with Nature, namely Experiments, Observations, Dissections of Dead Bodies, Botanical Gardens, and Chymical furnaces, which unfold to us the true meaning of Nature by making divers Observations upon it, and variously splitting and torturing it. Every youug Student knows that he can't find a more learned Book than the Patient himself, whose Disease will quickly and faithfully lay open to the diligent Observer a great many things worthy to be known, that perhaps a tedious course of many years Reading would not bring to his Knowledge. The Patient affords a true and lively Description of the Disease; but Books make Fictitious and Deprav'd Histories, by a Redundant Jargon of Fallacies and vain Speculations. However, in order to pass from the confus'd Labyrinth of Dis-

eases, and open the way that for so many Ages has been stop'd up, one must not satisfie himself with the Observation of a few sick persons, but must with equal Constancy and Ardour of Mind, extend his Observation to great Numbers.

X.

From what has been said, 'tis an obvious Inference, that those Physicians who are noted for great Learning, and an eternal dwelling upon Books, are seldom successful Practitioners; nay, they can never judge justly of the Practice, till they make it their only Business, and continue in it for some time. We have a pretty Story to this purpose recorded by *John Huartius*, Scrut. Ingen. Cap. 12. "When the *Arabian* "Medicine, says he, flourish'd in our Country, "a Physician likewise flourish'd, who was much "celebrated for Reading, Writing, Arguing, "Distinguishing, Answering, and Making Con-"clusions; and in the performance of all these "Offices was so Eloquent, that his Audience af-"firm'd, he could not only Cure Diseases, but "even raise the Dead to the Fellowship of the "Living. But after all, when he apply'd him-"self to Practice, scarce any of his Patients e-"scap'd the Fate of expiating the Professor's "empty Knowledge with their own Death: up-"on which the Professor, not knowing the genuin "Cause of so many unlucky Events, and fearing "his Reputation and Interest might in time suffer "by 'em, bid adieu to the World, and ended "his Days in a Convent. The same Author has another Story that is yet more apposite to

our

our Purpose. "A certain Physician, says he, pri-
"vately importun'd me to tell him how it came
"to pass, that he who had long Study'd and
"perfectly Learn'd the Art and best Rules of
"Prognosticks as deliver'd in Books, was always
"disgracefully mistaken when he apply'd 'em to
"his Patients, and cou'd never come the length of
"Prognosticating the Truth. So far he. 'Tis a-
greed upon by the most Judicious Authors (as *Huartius* observes in the place above quoted) that *Argenterius* surpass'd *Galen* in reducing the Art of Physick to a more perfect Method; and yet 'tis said of him, he was so unhappy in curing Diseases, that most of his Patients either Dy'd under his Hands, or fell into Incurable Distempers: Upon which Account his Country-men were so frighten'd, that they ceased to imploy him. 'Tis needless to draw out of Authors further Examples of this Nature, since every Day furnishes us fresh Instances. Your Physicians therefore that are extream Learned, and over-forward in Philosophy and Theory, and like Spiders are always spinning out Wisdom out of their indigested Thoughts; these Men, I say, will never prove good Practitioners, unless they subject themselves wholly to Experience, and a continued course of Practice: For Diseases are of a hidden abstruse Nature; they work out their Effects by such secret ways, and so remote from human View, that 'tis very hard to trace 'em without diligent Observation. This made *Hippocrates* cry out so often in his Works, that there is something of Divinity (θεῖον) in Diseases: And if we consider either the Structure of the Body, or the Original and Causes of Diseases, or the Effects of Reme-

dies, we'll still find reason to cry out with *Hippocrates*, τὸ θεῖον ; nay, a singular happiness in curing Diseases, speaks some divine thing in the Physician himself; for your Men of ordinary Learning, have that εὐστοχία in tracing Diseases and applying Remedies, that the most Learned do sometimes fall short of. We conclude, therefore, what we have already prov'd, that a Physician tho' admirably well skill'd in the Sciences, and acquainted with Books, will never be a good Practitioner without Observation and Experience in the way of Practice. If any one speaks or acts against this Position, certainly Nature will object to him, what the Ancients did to the *Dialecticks*, viz. My Son you come from the University, you breath Pride from an empty Cabinet, from an unlearned Breast.

CHAP VIII.

OBSTACLE V.

The prepostorous reading of Books, and the pernicious Custom of making Systems.

IN order to vindicate the true way of Interpretation, in opposition to false Interpreters, 'twould be necessary to pursue two Arguments, one against the false Interpreters of Diseases, and the other against those of Books. But in regard that most of this first Book is taken up in correcting and restoring the true Interpretation of Diseases, which for the most part is now corrupt and deprav'd; it remains only that

that in this Chapter we should point to the Errors of the Interpreters of Books, and the Humours and Imaginations that prevail within them.

II.

I never think of that fatal Day, on which Medicine and the other Liberal, Sciences being trampled upon by the *Barbarians*, fell into the hands of the *Arabs*, but it overwhelms me with Grief and Regret. For as that was the first Date of the Acquaintance of the Arabs with the *Grecian* Books, so all their Commentaries upon 'em are rather the ridiculous Genealogies of useless Opinions, than the genuin Sense of the Author: And this false way of Interpretation serves not only to raise their Authority, but to stifle all further Enquiries. For Proof of this Assertion, we need only to cast our Eyes upon the Ages that succeeded the *Arabian* School, in which, the bewitch'd Physicians did nothing but skip and gad round the narrow Circles of the *Arabian* Commentaries; and thus spending all their time in canvassing the Works of a few Men, fell into almost a total Disuse of Thinking. 'Twas by those Means that so many vain Comments, and such an infinity of Capital Errors crept in upon Physick; and so the noble Art, which had in all times been the Governess of Health, became a mean waiting Maid to Factions.

III.

III.

Those who undertake the Interpretations of Books, endeavour to usher in their Commentaries with all sorts of Panegyricks upon their Authors, especially if they are Authors of the lower Form, or such as need no Commentaries; and giving a full Range to all the measures of Self-Conceit, are not afraid to fasten upon 'em the Epithetes of *Divine* or *Admirable*, or *the Miracle of their Age*, and to recommend the matter they treat of, as being the product of a Divine Genius, and of the highest Importance to all the Members of the Republick. Now 'tis not the Necessity of Vindicating or promoting the Glory of such Authors that prompts 'em to this Practice, but a hidden Itch of procuring the Applause of Learned Men upon the Plea of commenting on first Rate Authors. *Mundinus*'s Anatomy if compar'd with our modern Anatomy, is as far short of it as a Flea is of an Elephant; and yet not only *Cardanus* but several other Learned Men have plac'd their Glory in crying it up with the highest Elogies, and graceing it with the highest Commentaries. The reason that induced *Cardanus* and others to such Undertakings, seems to be only a Vulgar Slothfulness in never trying their own Strength, nor daubing their hands in the Dissection of Bodies; the Consequence of which was that *Mundinus*'s Text pass'd among 'em for an unshaken Truth: And for the same Reason Practitioners being scar'd, either by the Inconstancy of Success, or by the Severity of patient Observations, apply themselves at last, not to the Discovery of the

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Phænomena of Diseases upon their own bottom, but to the Interpretation of useless Books. *Hippocrates* the great Parent and Preceptor of Physick, did not behave himself so; for tho' he perceiv'd with Indignation the Obscurity of Diseases, and the Difficulty of making Enquiries, and bit upon the aukward Thought as upon a Bridle, yet he dived into Nature, and with a fixt Resolution pursued the proposed end; till at last by an indefatigable Patience in the way of Observation, and by the Importance of his Discoveries, he gain'd the Ascendant of all the Physicians that the Records of time can reach. And as the Anatomists of the Age we live in, by a narrower Scrutiny into Nature, and the frequenter Dissection of Corps and living Animals, have discovered that *Mundinus*'s Interpreters knew but little of Anatomy: so, if any spark of Truth should be added to Practice by this Method of ours, after I have made my Exit, it will give succeeding Ages to know how wide those Physicians are of the true Practice of Physick, who prefer the Barbarous Commentaries of the *Arabians*, to the Study and Practice of their own Observations.

IV.

Sometimes Commentaries are obscurer than the Text; and that because they either don't know, or else contemn the true Rules of Interpretation. He who undertakes to Interpret Books, ought to be furnished, not with a Vulgar and Superficial, but with a Solid and Deep Knowledge of the Subject he pretends to explain: Just as the Criticks do, who before they

pretend

pretend to unlock the obscure places of Poets or Historians, spend a great part of their time in purchasing the Knowledge of the Customs, Wars, Ways of Living, and other Circumstances of the Age in which the respective Authors Flourished. Now in order to comment upon Books of Practice, I look upon that Knowledge to be necessary which is the Product of long Practice, and patient Exercise. This Thought is justifyed by three of the greatest Interpreters that ever were, namely, *Duretus* and *Martianus* among the Ancients, and among the Moderns, the Celebrated and Learned *Lucas Tozzius* present Physician to his Holiness; each of whom spent the greatest part of their Life in exercising Practice, before they attempted to comment upon *Hippocrates*'s Works: For that Author's Works being nothing else but the pure Juice of Practice, a suitable Interpretation cannot be derived with more Certainty from any other source than the very Exercise of Practice. So that 'tis no wonder that the Commentaries of a Person whose Knowledge is superficial and not very near allied to the Subject in Hand, should prove more obscure than the Text. A great many usurp the Name of an Interpreter, who in effect are unworthy of that Title; for upon a narrow veiw of their Commentaries, we don't meet with the Explication of an obscure Meaning, such as is necessary to let the Reader into the Author's Sense; all their Periods are stuffed with a bulky show of Learning, an Ostentation of the Greek or Hebrew Language, and an Infinity of Quotations of Authors and Sentences that have no useful Relation to the Subject: Besides, the Text is

sifted

sifted and explained not according to the Ballance of Truth, but pursuant to the measures of the Prejudices to which those quoted Authors or the Interpreters themselves are liable.

V.

Commentators do often times fasten several Opinions upon their Authors that they never so much as dreamed of, with a design either to proclaim to the Learned their Acuteness in the way of commenting, or rather to favour the rules of that Hypothesis to which they have retained from their Youth. Now since Interpreters lye under these and other Errors, and are so far different from the other three we commended but now; we had better construe Authors acording to our own sense, than croud and disturb our Mind with foreign Fallacies. For sometimes the avenues and passages of the Mind are so obstructed by the obscure and irregular Idols of Commentaries; that they can scarce afford clear Room to the genuin and natural Rays of the History of Diseases, which dart in upon us from Observation. But after all, by this way of speaking I don't mean to scare Physic ians from Writing Commentaries, but only to oblige 'em to do it with Judgment. In earnest, when I sometimes consider of the cause that has laid such severe Fetters upon the practice of Physick, and hindred its progress from its present deplorable Straits into the wider bounds of Nature; I have nothing else in View but the propostrous way of commenting, and the tedious and unnatural Study of Physicians in pryinginto the Works of the *Arabia-*

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ians more than into those of Nature: for that Method of Study having reign'd for these two last Ages in a'most all Universities, and there being no Body to give the seasonable Admonition, 'tis no Wonder that Physick being by this means pluckt up from its Roots, does at this Day neither exert its power, nor grow up like a thriving Plant; but on the contrary breaks through and overturns the Judgments of Nature, by the shadows of Words, by popular observations, and by noble Experiments turn'd into a Fabulous Theory.

VI.

These and such like Absurdities will be avoided by those who heedfully mind the following cautions. In commenting upon Practical Books we should take the Interpretations of Nature for a pattern; and upon that score we may imitate the incomparable Interpreters of *Hippocrates*, whom we commended above, and who have retriev'd the primitive Majesty of genuin Commentaries and laid it open to posterity. We ought not to run too far out in Panegyricks upon our Authors, but to observe a regard to the opportunity of Place, Time and Merit; and where our adversaries have spoke well, we ought not to tarnish their sense by a malicious interpretation. We should neither design Violence nor lay Snares against the Judgments of Men, by foisting in disputes that are remote from the true sense of the Text, and are design'd rather to procure Praise and Veneration to our selves, than to unfold obscurities. Our Interpretations must be free of that confusion which oftentimes breaks the Thread of the Doctrine and of the genuin sense; for the Truth will sooner shine out of Falshood than out of

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Confusion. The Idols of the Mind, the Prejudices of *Hypotheses*, and Preconceptions drawn from other Sciences, must be entirely laid aside; by which means we may easily discover the mutual transitions of Errors into Truths and Truths into Errors. A Commentator must be indifferent as to Novelty and Antiquity, neither of which is to be laid in the ballance with Truth; for what is Ancient or Modern, is not therefore true or false as some Physicians imagine, who by that means give rise to dispute and contention. The Author commented upon ought to suffer neither Detraction nor Addition, but to be presented entire and like himself; nay his meaning should be so expresst, that his own Virtues may speak his praise, and his own Vices proclaim his disgrace. It must be expresst Word for Word, and the very local position of the Words must sometimes be retain'd, especially upon a matter of great importance and obscurity, such as we meet with in several Texts of *Hippocrates*'s Works. An Interpreter must not assume the office of a Judge, so as to reject what he do's not like, and substitute his own Advances in their Room: And indeed the greatest part of Interpreters are guilty of this Crime, by which, as any Reader may easily perceive, all Sciences and especially Physick have been much injur'd. Further, an Interpreter must avoid contradicting the Author; and he must not be too apt to doubt. Indeed upon the obscurest Texts, he may proceed like the *Academicks* in making Queries of every thing, and affirming nothing for a certainty, till after a long and patient consideration; and if after all he can't come at the sense of the Text, he had best leave

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it untouch'd to be examined and explained by some happier Genius. The Interpreters who are arm'd with those and the like Cautions, will do Justice to themselves and their Authors, and happily go through their Task. Having thus detected the Errors of Interpreters, our Method would lead us in the next place, to fall upon those, who obstruct true Practice by the coining of new Systems: But in regard we have allotted a whole Chapter for that Subject in the latter part of this Book, we think it more proper to wave it at present.

CHAP. IX.

OBSTACLE. VI.

The discontinuing of the Aphoristical Way of treating Diseases.

SECT. I.

AMong the Hindrances that have retarded the progress of Physick, that is not the least, which consists in tying it up to Methods, and in digesting and adorning it with abstracted and useless Notions. For that Methodical way gives out the Science to be entire and reduc'd as 'twere to a *ne plus ultra*; the consequence of which is, that Men are rendred not only less industrious in hunting after new Discoveries to illustrate and enrich the History of Diseases; but likewise so self confident that they fancy they have already reach'd the very bottom of the Science. And tho' it sometimes happens that

that a new and useful Observation may fall in their way; yet upon the consideration that they cannot accomodate it to their Method and way of division, they throw it away and contemn it as being forreign to their Profession. This makes it out that our Ancestors behav'd themselves more prudently. They knew very well that Method and regular Partitions might illustrate and ennoble Med'cine, but at the same time they were sensible, that at that rate it could not be confirm'd or arrive at a higher pitch. Accordingly, whatever Discoveries they made upon Diseases by a long course of Observation, these they threw into *Aphorisms* or short Sentences, ty'd up to no Rules of Method or Scholastick Subtility, but clearly and openly deliver'd. By this means they chalk'd out to Posterity both the naked Images of inventions, and the void Spaces left for the insertion of the new and ever multiplicable Voices of Nature. Now, this so necessary a way of promoting Physick, is at this day quite in disuse. For the Modern History of Diseases, tho' at first View it may seem to becopious, yet in effect 'tis barren and unprofitable; nay, if we consider the tedious digressions to Philology, the superfluous Narraives, the hungtry Questions, and such other triffles that accompany it, 'tis really infirm and corrupt. For, if we except those few Observatours who have mightily enlarg'd the boundaries of Medicine by a diligent and natural description of the Medicinal cases and Histories; all that the rest have added, with relation to their false Theory, and such other triffles, has rather cramp'd than promoted its progress. Now the way of setting down the Solid and repeat-

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ed observations of Diseases in a short and aphoristical Stile, will sufficiently appear from the succeeding Diseases, which were examin'd by patient and repeated observations made in the *Italian Hospitals.*

Of a Pleurisy.

I.

If you would discover a Pleurisy, place your chief care in observing the Nature of the Pulse. The hardness of the Pulse is almost an infallible sign of all Pleurisies; and while the Pleurisies are sudden or complicated with other Diseases of the Breast, if you observe a hardness in the Pulse, *i. e.* too great a distention or Vibration of the Artery, tho' the other signs are absent, you may assure yourself that the Patient is under a Pleurisy; for a hard pulse is an inseparable companion of all inflammations upon the Nerves or Membranous parts.

Having thus discover'd the Pleurisy, during the whole course of the Cure, mind nothing more diligently than the difficulty of Breathing; for the Pleurisy is more or less hazardous according to the greater or lesser difficulty of Respiration.

A good Respiration is a good Omen, but a bad one is always to be dreaded. Thus we find that Respiration is rendred more difficult as the Pleurisy increases, and upon the approach of Death 'tis difficult to the last Degree. But Prognosticks taken from the Pulse are not so certain; for in the Diseases of the Breast, nothing departs sooner and more easily from its natural state

state, than the Pulse. I have frequently observed an Intermitting Pulse in a Pleurisie, without any danger; and once or twice I order'd Bleeding, notwithstanding that the Pulse was in that condition, because the Indication of Bleeding was too urgent.

Such Pleuritical Persons as were seiz'd with a pain in the inner part of the Ear, followed by an Impostume and *Pus*, were all cur'd, pursuant to my repeated observations in the *Italian Hospitals*; but especially at Rome in the beginning of the Year 1694. at which time the Winter was severe, and attended with frost and Snow, which in *Italy* are unwonted, and that gave rise to raging Pleurisies.

After the cure of a Pleurisie, if you observe a little tickling Cough, and a gentle heat overrunning the whole Body towards the evening, you may prognosticate either a Relapse into a Pleurisy or a Suppuration. I have found this noble Precept of *Aretæus* to prove true in several cases, where I predicted accordingly.

Such Pleurtical and Peripneumoniacal Persons as spit up nothing, are in a hard case, unless they void Urine plentifully. *Hipp. 4. acut.*

In the Roman Climate Bleeding is the principal remedy for a Pleurisie, after which diluting Med'cines joyned to attenuating and anodyne Ingredients will quickly set it off.

Sometimes little tubercles or small swellings will lye hidden in the Lungs for several Years without annoying the Patient sensibly; and will at last discover themselves after the cure of a Pleurisie or a Quinsey, or a Fever. Therefore, if after the cure of any Fever the Patient

is seiz'd with a pain in his side or Back, or any other part of the Breast, together with a difficulty of Respiration, so that he cannot breath without keeping his neck upright, in that case the Tubercle is turn'd to an Inflammation and tends to suppuration, which must be immediately taken care of. This Caution of *Dodonæus*'s I have observ'd to be just in two instances in the Hospital, after having dissected their Corps and considered all circumstances.

In a Pleurisie, when an Indication of dissolving appears, Camphyr and the Remedies prepar'd from it, are almost an infallible secret for performing that office, especially if the Pleurisie is epidemical and malignant, or rather occasioned by an extraordinary thickness of the Blood. If the same Indication continues, about an hour after the exhibition of the comphorated Medcine, let the Patient drink a pectoral Decoction, of the Roots, *for instance*, of Masterwort, Angelica, and Coltsfoot, and the leaves of Scabious, Coltsfoot, *&c.* The Decoction must be drunk not only warm but very hot, that the elastick and active parts of the Roots may be convey'd in a full stream with their entire Vertues to the affected part of the Lungs. The exhibiting of Liquors very hot is to me a secret for dissolving stubborn viscosities in an Epidemical and Malignant Pleurisie, as well as in all other Diseases of the Breast proceeding from the like cause. For I have seen Patients in a manner livid for want of Respiration who have been quickly relieved by repeated draughts of a pectoral Decoction taken down very hot.

As the accession of a Looseness is healthful in the Diseases of the Head, so 'tis very pernicious in those of the Breast, especially if they are acute. For this reason, we must avoid Purgation in a Pleurisie, and take care the Body be not render'd too soluble by a repeated use of Glysters; for by these means the disease will be exasperated, the spitting suppress'd, and the Symptoms will be inflam'd to the Patients ruine.

After the cessation of the pain of inflam'd parts (especially in the case of a Pleurisie or the Inflammations of Membranous parts) if the Fever still continues, or increases, being attended with a low intermitting and frequent Pulse, cold Sweats, *&c.* 'tis a fatal Omen; for in 12 Hours time the Patient will turn delirious and soon after expire; the Inflammation having terminated in a Gangrene. This Caution we owe to *Hippocrates*, and I have seen three instances confirming it in the Hospitals.

Pleurisies are frequently unperceiv'd because they are painless, and this gives rise to gross mistakes in the way of Practice. In order to discover these occult and indolent Pleurisies, make the Patient lye down upon his right or left Side, and after he has fetch'd his Breath with force and cough'd once or twice, ask him if in Breathing or Coughing, he felt no pain or heaviness in any part of his Breast; and assure yourself that a Pleurisie is seated in that place where he feels the pain or heaviness. By discovering Pleurisies in this manner, I have benefited many Patients.

The Relapses of Pleurisies, are, almost all of 'em, mortal, according to *Hippocrates*; that is to

say, if the Pain and Fever having ceas'd for instance on the 14*th* Day, return again on the 21 or any other Day, that Relapse *Hippocrates* calls mortal. But if only the Fever returns without any pain in the side, the case is not so desperate. Tho' after all, the Relapses of Pleurisies are always to be dreaded.

When an Inflammation of the Pleura or Tubercles in the Lungs, terminate in an Impostthume which turns to *Pus*, then a violent continual Fever is followed by an intermitting Tertian or Quotidian, commonly about the 7*th* Day, which is a certain sign of the beginning of the Impostthume, as the learned *Dr Morton* in his noble Treatise of the Phthisick gathers by experience out of *Hippocrates*.

Pleuritick Persons are happily cur'd by mere Expectoration, and whoever goes prudently about that, will quickly find that the Pleurisie gives way: for sweating and the other evacuations are not so beneficial, because they do not evacuate the affected part.

If the spitting commences before the 4*th* Day, it shortens the Distemper according to *Hippocrates*; for after the 4*th* Day, the Patients strength being exhausted, and the spittings being thicker, they are not so easily brought up, upon which the Disease is inflam'd.

Those who exhibit Purgatives in the beginning of Pleurisies suppress the spitting, and inflame both the Fever and the Distemper. And those again who give strong Diaphoreticks in the beginning, occasion a Delirium or some other vehement Disorder of the Head.

In the regular Discussion of a Pleurisie, the Feaver ought first to cease, and then the Pain of the Side; but if after the cessation of the Pain, the Fever remains, or increases together with the other Symptoms, the Patient is in a bad Condition.

If in a Pleurisie the spitting returns after 'twas once stop'd, and is of a reddish yellow Colour, never prescribe Bleeding; for after Blood letting the spitting will stop, and the Patient will Die. Of which I have seen four or five Instances, in the Hospital.

If after a regular spitting, the Patient spits no more, tho' the Heaviness and Pain of his Breast continues, 'tis a pernicious Sign. 'Tis certain that no Pleuritick Person was ever cur'd whose Pulse was very hard, and for that reason small, and very frequent. *Galen. Lib. de Præcogn. ex Pulsu*, and in several other places.

In a Pleurisie Looseneſſes are pernicious; in which case I have frequently exhibited the following Bolus with very good succeess; Take of Requies Nicolai and Diaphoretick Antimony of each a Scruple; mix and make Pills to be taken at Night. For the Opiat stops the Looseness, and the Antimony throws out the Humours to the Skin, pursuant to *Hippocrates*'s Maxim, *Alvi laxitas, Cutis Densitas*; when the Belly is loose the Pores are stop'd, and *e contra*: Wherefore, if the beginning of a Pleurisie is attended with a Looseness, prescribe the foregoing Bolus immediately; and after the Looseness is stop'd, order Bleeding if there be an Indication for't.

In the beginning of a solitary and exact Pleurisie the spittings are but very Scanty, the Pulse hard and frequent, and Respiration short.

If a difficulty of breathing and expectorating happens on any Day, whether the 2*d*, 4*th*, 5*th*, 7*th*, &c. either before or after bleeding, I presently clap a couple of Blisters to the Legs, pursuant to *Hippocrates*'s Caution, *In Pulmoniis quicunque tumores fiunt ad crura optimi sunt.* I have still observ'd, that the Application of these Blisters promotes the Expectoration, facilitates Respiration, and stops the Loosenness if there be any; and soon after the Patient recovers.

In a Pleurisie, Peripneumonia, and such other inflammatory Diseases, If the Blood drawn out of the Vein, has not a white Crust on its Surface, 'tis a pernicious Sign; for in that Case, the Substance of which the Crust is compos'd, remains in the Lungs, and stuffs 'em up; upon which the Fever, Inflammation, difficulty of Breathing, and other Symptoms do quickly increase. If at the second Bleeding this Crust begins to appear, 'tis a good Omen: but if it do's not appear even then you must give over Bleeding, or else you'll kill your Patient: for repeated Bloodletting robs the Blood of its more volatile Part, and so dispose's it the more for Coagulation. This Caution was communicated to me by the Learned and Humane *Lancisius*, formerly Physician to Innocent XI.

Such Pleuritick Persons as have a noise of much Phlegm in their Breast, a sad Countenance, and a golden Tincture upon their Eyes, are in a desperate State. *Hippocr. Coac.*

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In the Declension of the Pleurisie, if the Abdomen sometimes swells with Wind and sometimes falls, 'tis a good Sign; for commonly the Patient is cur'd about the 10*th* Day.

Of Fevers in General.

In the beginning of acute Fevers abstain from Purgatives, and from over Volatile and Violent Remedies; for the Disease being yet Crude, you'll either throw out what is not to be evacuated, or inflame the Fever, or stiffle the Patient.

Let no Catharticks or violent Diaphoreticks be given before the 7*th* Day; for the peccant Matter is yet Crude, and mix'd with good Juices, and do's not yield to such Remedies till the Signs of Concoction appear.

In continual Fevers, if the Vessels be overturgid, if the Blood runs impetuously to the Head, Lungs and other Members, and threatens a Phrensy, if Youth and a hot Temperament be added to the other Symptoms: In this Case be sure to let Blood in the beginning, that is, before the 7*th* Day, and repeat the Blood letting according as the Symptoms require: For the Vessels being by this means empty'd, and the Mass of Blood as 'twere loosen'd, you make way for the Diaphoreticks, Purgatives, and such precipitating Remedies as are proper in the Status or Height of the Distemper.

If you have the least suspicion of a Malignant Fever occasion'd by a Coagulation, avoid Bleeding like a Plague.

I have obſerv'd that Vomits are more or leſs proper according to the Variety of Countries and Climates. At *Rome* we do not find 'em ſo ſafe in Fevers, as others do in the Northern Countries; ſo that in preſcribing Remedies, you muſt always have in View the Nature of your Climate, and the Temperament of your Country-men; and never preſcribe out of Books without a nice regard to theſe.

In acute Fevers, the Phyſicians are blamable for two things, namely, a confus'd and over-bulky meddly of Med'cines, or elſe unſeaſonable and immethodical Adminiſtration. Hence is it, that the Patients lye under ſo many Inconveniencies, that the Periods of Diſeaſes are ſo various and inconſtant, and their mutual Permutations Incredible. Theſe the Ignorant Phyſicians impute to the Nature of the Diſtemper, and not to their unſteddy and ſpeculative Methods of Cure: But time will undeceive us yet further.

In this Climate (*Rome* I mean) I commence the Cure of acute Fevers with Bleeding, and not with Purgation, unleſs it be attended with an exceſſive Vomiting, or uſher'd in by an immoderate Repletion: And I have frequently obſerv'd, that immediately after Bleeding there inſues a ſort of ſweat to the eaſe of the Patient

An exquiſite ſemitertian Fever is very common about this Town; nay it reigns a'moſt at all times: Which *Galen* was not Ignorant of, when he liv'd at *Rome* near *Minerva's forum*, in the Street that leads now to *Aggrippa's Pantheon*, in the Reign of the Emperor *Antoninus*, a Prince to whom

whom not only *Galen*, but the whole Republick of Physick, are considerably indebted. 'Tis said, that when *Galen* made the first *Theriaca* at *Rome*, to the great Satisfaction of the People, this Prince presented him with a Golden Chain, and a Medal with the following Inscription,

ANTONINUS ROM. IMP.
GALENO MEDIC. IMP.

But to avoid Digressions: Experience is witness, that *Semitertians* are very brief here; and *Galen* as I said above affirms the same thing; *de loc. com.* 25. and *de morb. temp.* towards the end. And now that I am speaking of a *Semitertian*, 'twill not be improper to insert the Words of the Learned *Fontanus* upon that head which you may read in his Commentary on *Dodonæus*. "*This Fever*, says our Author, *affects* the Ventricle, especially its Nervous parts and the Liver; and for that reason I think 'tis justly listed into the number of mortal Diseases. Oftentimes it degenerates into a Hectick, or brings on a Dropsie by reason of the great Obstructions; as *Hippocrates* observes, 1 *Epidem. com.* 3. *Aph.* 5. &c. This Fever is very common among the Clergy, the Nobility and the Courtiers; among Young Men, and such as lead a slothful Life, whilst they live high; among those who pamper and humour themselves too much, and among the Inhabitants of hot Countries; in pursuance of which, we find they're very frequent in *Æthiopia* and *Italy*.

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Now a *Semitertian* advances in this order. A fresh Paroxysm attacks the Patient every Day; but one day 'tis severer with a redoubled Shivering, and the other 'tis milder as every one may observe. 'Tis a long and dangerous Disease, and commonly attacks Men or such Youths as are upon the Borders of Manhood, and that in the Autumn. The Stomach is chiefly affected; and the other Symptoms are sometimes a Lethargy, sometimes Watchings, the Tongue dry and parch'd, *&c.*

Since I am speaking of Fevers, I can't but mention my Surprisal, in seeing most Physicians derive the Origin of Fevers from an Acid, and endeavour a Cure by Antiacids, to the great Detriment of the Patient. For if we take a right View of the Matter, we shall find that *Alcali's* variously alter'd are rather in the Fault; for whatever is done in a living Body, especially in the Blood, is brought about by Fermentations, which being repeated again and again, rais'd to a higher pitch, or unduly alter'd, produce Plenty not of Acid Parts, but of an Alcali, Lixivious, Sharp and Calcin'd Salt or the like: This we observe chiefly in Fevers, in which we meet with manifest Marks of Sharp Alcaline, Lixivious and Calcin'd Salts, and oftentimes make a happy Cure only with diluting Med'cines qualifi'd with a gentle Acid: Witness, the Ardent Fevers. For this reason, I can't but extol the Sovereign Vertue of the *Cissus* of *Antimony*, which by its subacid Quality stiffles in the Bud, many Fevers occasion'd by a change of Air, as well as others of a more ardent Nature. The Fevers that Rage at *Rome* in the Summer Time, upon the change of the Air, (not to mention the Errors of Diet, that are frequently committed in rambling out to take

take the Pleasure of the Country, which frequently gives rise to these Fevers, without any influence from the Air) the Summer Fevers, I say, proceeding from a change of Air, are produc'd not by acid, but by alcaline sharp Salts; for the various Particles of the Earth and of Minerals, being rais'd up into the Air by the Heat of the Sun, are there attenuated by the Accession of fresh Heats, and so cohobated and volatiliz'd as to assume an Intense Volatility, and an alcaline sharp Nature rather than an Acidity. The Particles thus Volatiliz'd, being communicated to the Blood by Inspiration, do first dissolve its Mass, and the Dissolution is presently followed by the Effects of Coagulation. For the Truth of this we appeal to Experience; For Acids, even those of the strongest Class become either sweet, or insipid, and Alcali's, after a Fermentation, whether rais'd by the Sun, or occasion'd by an intestine Motion of long Duration; for the Fermentation breaks the Edges of the Acid, and converts the Acid into an Alcali. Accordingly we see Treacle Water, which at first is Acid, becomes Sweet after two Years standing; nay the very Acid Spirits dulcifie of themselves by being long kept: And so of all the rest. But after all I don't deny that Acids produc'd in the first Passages and communicated to the Blood, may sometimes put it into an irregular Fermentation; tho' at the same Time I must say these Acids must be over and over Violent; for otherwise their Edges would be so broken by undergoing repeated Fermentations with the Blood, that they would of necessity become Alcali's, and so either prove Inoffensive,

or

or by assuming the Nature of a morbific Alcali disorder the Parts and give rise to Diseases: Which was the Conclusion I offer'd to prove. But of this more at large in a particular Treatise, intituled *Acidum Insons.*

Of the Worms in Children.

I.

Let the Diseases of Children be what they will, we ought always to suspect Worms. For they either directly feed the Distemper, or in the progress of it, the latent Worm-brood is stirred up, and gives plenty of Worms.

Children and Persons of a Phlegmatic Pituitous Constitution (as they call it) are more subject to Worms than adult and Choleric Persons.

When Children are much given to the wringing of their Belly with their Hands, 'tis a sign of latent Worms; but if they are likewise troubled with gripes the sign is much surer.

There's a just occasion to be jealous of Worms when Men are taken desperately ill all on a sudden without any manifest cause, and without the symptoms that accompany other Distempers; when they are seiz'd with Apoplectick Fits, with a coldness in their Limbs, a very low Pulse (which is almost always a sign of latent Worms as well as sighing) a Speechlessness and sometimes unexpected Madness. In such cases there's nothing better for adult Persons, than to exhibit out of Hand in Broth twelve Grains of

Mercu-

Mercurius dulcis and six Grains of Scammony sulphurated. For Children the dose must be lessen'd; or which is yet better, you may give 'em crude Quicksilver to the bigness of a Pea with Broth; for it operates miraculously. *Chesnau.*

In the Diseases of Children we have always an eye to Worms; just as in the Diseases of Women we have still a regard to the Menstrual Flux and Hysterick Fits. Generally speaking, in some stubborn Diseases, both of Men and Women, and such as observe no peculiar Period, we suspect a venereal contagion, which now adays is either Hereditary, or deriv'd from the Nurse's Milk, or being once fastn'd npon the Blood by the Sins of Youth and the course of humane Frailty, is never afterwards extirpated, but starts up of a sudden under the mask of divers Diseases, and creates a great deal of Trouble to the Physician; whom I would advise to be wise and sagacious.

Take of crude Mercury right cleansed, an Ounce, Grass Water and Purslain Water, of each four Ounces: Macerate for two hours, stirring often and tightly; then decant and strain the Water, leaving the Mercury in the Vessel. There is not a better Remedy than this against Worms; Witness *Dr Bates* the English Physician.

To awake all on a sudden with a trembling, especially among Children, is taken by the old Women for a certain sign of Worms. But the same thing happens in eruptions of the Measles or Small Pox, as *Chesnau* teaches us; which

I have frequently obſerv'd in my own Practice.

The Colick in Children ſprings very often from Worms. *Matthew's Pills*, I mean thoſe which in England are called *Starkius*'s, are very much cryed up for mitigating all ſorts of internal pains; but whether that Vertue extends to the Worm Colick, I have not yet met with any thing in Books to inform me. But of theſe more anon, when I come to diſcourſe of the Colick. They are ſold at Rome by *Mr. Girotti* an Apothecary.

Worms Sculk oftentimes in the Cavities of the Gut Colon, which are ſometimes very hard to be reach'd by Med'cines; and thence it comes to paſs not unfrequently, that the very beſt of Remedies fall ſhort of the deſir'd ſucceſs in the cure of Worms.

Drops of Blood iſſuing from the Noſtrils in continual Fevers, are ſometimes a Sign of latent Worms, according to the moſt Judicious Authors.

If you have but the leaſt ſuſpicion of Worms I would not have you to delay the exhibiting of proper Remedies, for we have frequent inſtances, in which they ſuddenly carry off not only Children and Infants but even adult Perſons.

In the Year 1694, I joyned with a Friend of mine at Rome, in making an experiment upon Worms, and found that live Worms put in the Spirit of Wine, and in the Water of the infuſion of Wormſeed, dy'd after 5 Hours: when put into Wine or into the Solution of Aloes, of the extract of Germander, and extract of Tobacco, they dy'd after nine Hours. At 9 a Clock

Clock in the Morning we put fresh live Worms into the Oil of sweet Almonds, and found them alive the next day, only they were in a drowsy languishing condition. Some we put into the juice of Lemons, and found them not only alive but very well the next day, as well as those we had put into a Vessel half full of Quick-silver, observing that in this Vessel they avoided the contact of the Mercury, and used their utmost efforts to get at the Head of the Vessel.

Of the Small Pox and the Measles.

I.

Among acute Diseases the small Pox make no inconsiderable Figure, and in regard the mass of Blood is then inflam'd, and as it were set on Fire and blown upon by a Malignant sort of Air, a Physician stands in need of a great deal of Learning, Prudence, and Sagacious Patience in managing the Cure; nay he is bound religiously to observe the Motions of Nature, or else he will fall into pernicious mistakes.

Those who purge in the beginning of the Small Pox, or exhibit violent Diaphoreticks, do frequently add fewell to the Fever, and excite internal Inflammations, Delirium's, inflammatory disorders of the Lungs, most violent Coughs, and a great many such like Symptoms.

The Eruption of the small Pox is the work of Nature; for which reason Nature ought to be obey'd, and its motions humor'd and back'd by seasonable Remedies. In earnest, in the cure of Diseases, especially such as we call acute,

a great part of wisdom lies in keeping our Minds untainted with the prejudices of Sciences, and our Theory clear of the Errors of the Schools, as well as unbyas's'd by Humour and Inclination; and in taking care not to Thwart the Motions of Nature by unseasonable Remedies.

If the Blood boils too high, if it flies up to the Head with a rapid current, if inflammations of the *Viscera* and delirium's are at Hand, in such cases I instantly let Blood and that in a Quantity answera ble to the urgency of the occasion. In the mean time, I prescribe the gelly of Hart's-horn, the emulsions of the Seeds with Water of Violets, the Oil of sweet Almonds with Broth qualified with the cold Seeds; by which means I partly check the impetuous Force of the Blood, and keep it from ranging beyond the Bounds of its Channel. This Method I continue to the fourth day, at which time, if the small Pox begin to appear, I assist and second the Motion of Nature with gentle Diaphoreticks, such as the Gelly of Hart's-horn, *&c.* and carefully observing Nature's progress, I give a various turn to my Med'cines, pursuant to the various impetuosity or mildness of the Humours.

About the fourth day, if the imminent eruption affects the Head with great Heat, Anxiety, startings of the Tendons, *&c.* I immediately order scarified Cupping Glasses to be applyed to the shoulder Blades, whereupon, there follows a present Revulsion of the raging Blood, the abovemention'd Symptoms are Stifled in the bud, and soon after the small Pox come happily out.

If

If the Blood drawn from the Veins, shows upon its Surface a white large and gross Crust, such as we meet with in all Inflammatory disorders, it speaks that the small-Pox will be numerous and very dangerous. This I have seen frequently, and have heard it inculcated by the learned Physicians that attend the Hospitals in *Italy*; and I recommend this and the abovementioned hints to the Reader, as being the product not of pleasant Speculation, but of patient and Stern Observation.

If the Blood flies impetuously up to the Head, and if the *Hypochondria* be distended, I order, Spunges soak'd in warm emollient Decoctions, to be applied to the Palms of the Hands and Soles of the Feet, and by that means the Symptoms are much abated.

The Diaphoreticks prescrib'd after the fourth Day, must be more or less active, in proportion to the greater or lesser accension of the Blood, the Degrees of its force upon the Head, Lungs, and other *Viscera*, and the Urgency of other Symptoms.

A slow Lingring Fever without shivering or cold Fits, a heavy dulness under Sleep, a pain in the Head and Back, sometimes a Hoarsness, somtimes a Bleeding at the Nose, are Signs of the approaching small Pox: Witness *Dodonæus in Praxi. Cap.* 20. *Lib.* 2.

In the Diseases of Children, we ought always to be jealous of two things, namely Worms and the small Pox; and we ought never to be

positive of the Nature of their Fevers, till after two or three days, that we may be sure as to the small Pox, *&c.*

When the small Pox are a coming, I have observ'd the Fever that ushers them in exasperated with violent pains in the Back. Convulsive Motions in the Fevers of Children, that have not had the Small Pox, foretell that the Small Pox will appear next day: Witness Doctor *Sydenham*'s infallible experiment.

We conclude therefore that a very acute pain in the Back, some convulsive Motions, a Cough, Watery Eyes, *&c.* foretell that the Fever will be of that sort which retains to the Small Pox.

An unskilful managment of the Small Pox, produces inflammatory disorders of the Breast, and sometimes a sudden Suffocation.

Those who spit much in the Small Pox, seldom dye of them; nay I never saw them carry off one, that had the Benefit of Spitting. *Valschmid.*

If an Infant is seiz'd on a sudden with Epileptick Fits, it speaks either Teething or the Small Pox; and if the Small Pox appear after the Fit, they are always of the milder sort, and seldom run together.

Take of the Oil of Sweet Almonds, two Ounces; *Sperma Ceti*, three Drams; distill'd Oil of Rhodium, four Drops: Mix, and make an Ointment according to Art: This is an admirable remedy for defacing the Pits of the small Pox;

it

it mitigates the pain, takes off the Acrimony, *&c.* as the learn'd *Doctor Bates* has well observed.

If adult Persons are not well taken care of in the small Pox, they oftentimes dye Frentick; So that in such an Age, the excessive Heat ought to be discreetly check'd, to prevent its violent fluence upon the Head.

Of the Colick.

I.

A bilious Colick is frequently attended, with abscence of Speech and a Hoarse Voice, which last during the whole course of the Distemper. This Hoarsness uses likewise to appear in bilious Fevers, so that we may justly reckon it a Diagnostick of such Diseases as spring from the Bile, or from the Salino sulphureous and adust particles of the Blood.

In a stubborn Colick, if there comes a copious and universal Sweat with an extream weakness, you may propheſy the speedy arrival of a Palsie.

If an unequal Distention, and Constipation of the Belly, and a stiff contraction of the Muscles, accompany a Colick; 'tis a Sign the Nerves are affected rather than the Intestines.

The readiest consequence of a Colick is a Palsy; and therefore you must be very cautious in

exhibiting large Quantities of Opiats; for they use to be followed by plentiful Sweats, and then a Palsy.

Chamomile is the true Antidote of a Colick, from any cause whatsoever; especially, if it comes after a Sudorifick of Harts Horn Philosophically prepar'd, Diaphoretick Antimony, and the Powder of Unicorn's Horn.

When you use Opium in a Colick, be sure you always add Castor; for it corrects the Narcotick Vertue of the Opium, and allays the Pains.

I have frequently tryed the good succes of the following Pills in a Colick proceeding from the Viscidity, grossnes, and preternatural Acidity of the Aliment or Humors in the first passages. Take powder of Rue, and Sal Gem, of each equal Quantities, Skim'd Hony a sufficient Quantity to make a Mass.

I must likewise recommend to you the following Powder for an *Arcanum*; Take of the Powder of the Leaves of a Wild Fig Tree that grows upon the ground, and not upon a Wall, half a Dram; Elm Leaves pulverized a Scruple. Mix and exhibit in Broth. 'Twill lay the pain immediately. This very Powder taken in White Wine is a Specifick in Nephritick pains, only the Quantity of the Elm Leaves ought then to exceed that of the Fig Leaves, whereas in a Colick the Quantity of the Fig Leaves is largest.

In

In a stubborn Convulsive Colick, and spasmodick Pains of the Belly arising from a sharp gnawing matter, especially if accompanyed with Thirst dryness of the Tongue and an Universal Heat, I never met with a more Sovereign Remedy, when all others fail'd me, than Bleeding in the Arm, and a diluting Anodyne alter'd chiefly with Chamomile. After Venæsection, I have seen the pains presently stiffled and Glysters immediately thrown out that were kept up before by the spasmodic contraction of the Fibres of the Intestines. To this purpose is the observation of *Spigelius*, who in dissecting the corps of such as dyed of Semitertian Fevers, and had been tortur'd with a dismal Pain in the Belly as if it had been a Colick, found the Intestines inflam'd and overrun with a *St Anthony's* Fire: In which case, to omit Bleeding and substitute Purgation in its Room, as 'tis commonly done, is a very pernicious Practice.

The Colick pain abates almost always in a Bath, and therefore you ought to have recourse to a Bath, when the pain is obstinate.

The Belly-aches occasioned by walking barefooted upon the cold Floor, are quickly cur'd, by applying hot bricks to the Soles of the Feet; for the pain in the Belly Decreases as the Heat of the Feet Increases.

I have observed an odd sort of a secret and unexplicable Sympathy between the Diseases of the Belly and those of the Skin. I have seen Colick pains turn to Arthritick; and Arthri-

tick pains, on the other Hand, taken off by the acceſſion of a Colick or a Looſneſs. To this purpoſe we find *Hippocrates* ſaid; *A looſe Belly makes a thick Skin, and a thin Skin makes a conſtipated Belly.* And accordingly we experience in our Practice, that ſtubborn Looſeneſſes are readily cur'd by Diaphoreticks, when other Med'cines prove ineffectual.

If the Excrements are not retain'd, if the Pain ſhifts and Intermits, the patient will quickly be well.

A Colick turns ſometimes to an Impoſthume, and ſometimes to a Dropſie.

If the Pain relents upon the Expulſion of the Excrements or of Wind 'tis a good Sign, notwithſtanding it returns again. In a Colick accompany'd with a Vomiting, cold Sweats, *&c.* when every thing elſe fails, the Tincture of Amber, both Cures the Preſent and prevents the imminent Fit.

Before you exhibit Opiats, be ſure you always inject a Glyſter. Diaphoreticks joyn'd to Opiats are happy Anticolick Med'cines. But you'll do your Patient no kindneſs, unleſs you carefully diſtinguiſh between a *Humoral* and a *Convulſive* Colick. All cold things are unfriendly to the Breaſt and the Inteſtines; be ſure therefore that you avoid 'em in the Caſe of a Colick.

An habitual and endemial Colick ariſing chiefly from the Acid of Wine, is cur'd by Sudorificks alone, provided an Anodyne Remedy be interlac'd

lac'd in the Evening. In such cases, I commonly make use of a Pill made of *Diascordium* and *Confectio Alchermes*, or *Hyacinthina*, &c.

Matthews's (*alias Starkius*'s) Pills are incredibly Beneficial in all Pains whether Internal or External. Invenereal Pains I use to mix with 'em Gum, Guiacum and Mercurius Dulcis, and prescribe our Antiveneral Decoction to be drunk above it. The Composition of these Pills is to be met with in the Dispensatory of Doctor *Bates* an *English* Physician.

Sometimes Purgatives are of good Use in a Colick, especially if 'tis not attended with a Vomiting and a Fever; and if they are given in a liquid Form. In my own Practice I commonly prescribe a Dram of the Powder of *Cornachini*, ordering to be drunk above it Broth qualify'd with Chamomile Flowers.

When the Colick Pain is fix'd to one place, and accompany'd with a Fever, it uses to terminate in an Impostume; but if the Pain shifts, we meet with no such thing.

Of a Frenzy.

SECT. I.

In the Climate of *Rome* I have observ'd, that blistering Plaisters applyed to Frentick Persons, kill'd more than they cur'd, or at least did more harm than good: But in a Case of this Importance we ought not to pass a rash Censure.

In the same Climate I've observ'd, That blistering, Plaisters apply'd to delirious Women were more Beneficial to them than to Men; and that several Women in that Condition got happily through.

If a Delirium is threaten'd or appears already, instead of Blistering I use to open a Vein in the Foot, or else the Salvatella in the Hand, and then prescribe diluting Med'cines of the cold Seeds, Melons, *&c*, by which means I've seen the Delirium quickly check'd.

In acute Disorders a black Tongue is a'most always followed by a Delirium.

When the Patient is Delirious with an acute Fever, a parch'd Tongue, and the Signs of a great Inflammation upon the *Viscera*, if you then apply blistering Plaisters, all goes wrong and generally he Dies in Convulsions; whereas if you breath a Vein in the forhead or Arms and then allow a liberal and continued use of diluting Med'cines, you'll easily compass the cure.

But

But of this more at large in our Treatise *de usu & abusu Vesicantium.*

If a Looseness insues upon a Delirium, especially when the Disease tends toward a Concoction, it gives a happy Solution; and I have oftentimes observ'd, that Delirious, restless and anxious Patients, have been much better, in a Days time, after the accession of a Looseness. Going upon this repeated Observation that a Looseness takes off a Delirium, I trace Nature's Steps, and have try'd oftener than once the good service of the Powder of Cornachini, ordering to be drunk above it large quantities of diluting Med'cines, of the Decoction of Barley, Filings of Harts-horn, Sal-prunel and other dulcifying Ingredients; especially if there be a great heat upon the *Viscera*, and ground to suspect an Inflammation.

If a Frenzy turns to a Lethargy, 'tis an ugly sign; but if a Lethargy turns to a Frenzy it promises well.

Ardent Fevers are always attended with high-colour'd Urine; and therefore if in such cases the Urine becomes whiter and thinner, and be accompany'd with Watchings, Perturbations of the Eyes, a Stammering Tongue, &c. you may safely prognosticate a speedy Delirium.

A thick gross and muddy Urine in acute Diseases, is follow'd for the most part by disorders of the Head; so that when such Signs appear, if the Patient inclines to Sleep, and has a low Pulse, with such like signs of Coagulation, you may

may infallibly assure the By-standers, that a Lethargy is not far off. But if this sort of Urine is attended with Watchings, Headaches, a dryness of the Tongue, and a burning heat upon the *Viscera*, a Delirium will speedily visit you, as I have frequently observed in the Hospitals up and down *Italy*.

According to *Valschmidius*, the gentler sort of Acids, and the Cinnabarine Powders with Emulsions, are the chief internal Remedies in a Frenzy.

Many Mad People have been cur'd by being duck'd in Water, after the same Method with those bit by a Mad Dog, whose only Cure consists in a repeated immersion in Water. This Method of Curing mad People, has been try'd in *England* with great Success by Mr. *Robertson*; as *Mercurius*, the Son of *Helmont*, informs us in his Treatise *De Homine*, §. 29.

Of

Of an Asthma.

I.

Unless you rightly distinguish between a Convulsive and a Humoral Asthma, you'll never make a happy Cure.

If your Patient is troubl'd with a difficulty of Breathing, open a Vein in the Arm, notwithstanding the presence of a Dropsy. *Hipp. Epidem.*

If in the Night time, especially after three or four hours Sleep, the Patient awakes of a sudden, with a violent Asthma and Suffocation Fits upon him, and presently runs to the Windows in quest of the free Air; you may rest assur'd that he has a Dropsy in his Breast especially if his Hands or Feet begin to swell; and the Face loses its wonted colour; and above all, if he observes a heavy Numness, or a beginning Palsy in his Arm We meet just with such a Numness in the Arm, in the other Diseases of the Lungs, particularly a Peripneumonia. If a Pleurisy or Peripneumonia invades Asthmatick persons, they generally dye of it.

A Dysury or difficulty of Urine, coming upon an Asthmatick person, is a good sign, and upon the sudden Cessation of the Dysuria the Asthma returns. In confirmation of this

this, I have made the Observation several times, that in the Diseases of the Breast, we ought always to push toward the Urinary Passages, Nature having shewn us the way; and that there is a great sympathy between the Legs and the Breast, as well as the Privities and the Breast; the Diseases of which Parts undergo a mutual Commutation.

The Diureticks, prepared from Lixivious and Acid Salts, are not so very safe in the Diseases of the Breast; for they raise the Cough and exasperate the Illness. But on the other hand, the powder of Hoglice, the Preparations of Turpentine, the Balsam of Peru, the Decoctions of the opening Roots, *Fernelius*'s Syrup of Marsh-mallows, *&c.* promote Urine very powerfully; and at the same time are not offensive to the tender little Membranes of the Lungs.

Impostbumes happening in the Legs of Asthmatick persons, may chance to take off an Asthma. *Rhasis.*

Asthmatick Fits return more frequently in a cold and moist Air, especially after hard Drinking.

An Asthma may either proceed from one's Parents, or from an intemperate way of Living.

An Asthma sticks by Old persons till they dye; and sometimes the same is the case of other folks.

Fat

Fat and Idle persons are most liable to an Asthma.

Sometimes an Asthma turns to an Inflammation of the Lungs; and upon that score you ought to be cautious of too volatile Remedies; for these may readily produce an Inflammation in the thin and tender Membranes of the Lungs, continually fill'd with a great stream of Blood.

A violent Asthma sometimes reduces the Patient to the last Extremity; in which case, Death is prevented by a speedy Venesection; and that repeated, if Necessity requires, or performed in both Arms at once. *Sperma Ceti* from a Scruple to a Dram dissolv'd in very hot Broth, is likewise very serviceable in procuring a freer respiration; but in a particular manner 'tis of wonderful use in that sort of Asthma, which is call'd, Pituitous and Humoral.

If an Asthma of Repletion, or that of a Catarrh that's speedily dissolv'd, is attended with a moist Cough, and if this Cough ceases and the Excretion lessens, while the difficulty of breathing remains, Death is at hand. *Valescus De Faranta*, &c.

Of a Diarrhæa and a Dysentery.

I.

Looſneſſes ariſe frequently from Grief and the Paſſions of the Mind; and are in a manner Incurable, if the cauſe of the Grief remains. This ſort of Looſneſſes uſes to be followed by an erratick Fever, till the Patient waſts and pines away to Death.

Sweating coming upon a Looſneſs ſtops it.

Looſneſſes are pernicious in the Diſeaſes of the Breaſt; they are likewiſe very offenſive to Women in Childbed, and Children ſeiz'd with Malignant Fevers.

You muſt not begin the Cure of a Looſneſs with Aſtringent Med'cines, for by that means you will occaſion ſtubborn Obſtructions of the Viſcera and Inteſtines, which at laſt are ſucceeded by an obſtinate Dropſy.

The eating of Meat inflames a Looſneſs, ſo that you muſt avoid it as much as you can.

Nothing renders the Belly more coſtive than the uſe of Venery; witneſs, *Hipp.* 7. *Epidem.* *Aetius*, lib. 3. cap. 8. *Paulus*, lib. 1. cap. 13. who all aſſert that the exerciſe of Venery dries the Belly. The ſame is obſerv'd by *Amatus Luſitanus*, *Cen.* 11. *Obſer.* 47.

Thoſe who aremuch taken up in Study or Domeſtick Cares, are coſtive. Coſtiveneſs is one

one of the Endemial Distempers of the *Roman* Climate.

Some People have been cur'd of Looſneſſes, and fainting diſorders of the Stomach accompanied with a Dyſentery, by chewing Cinnamon all day long, and ſwallowing the ſpittle of that Maſtication.

Sometimes a Purgative Med'cine raiſes a dangerous Superpurgation, which frequently occaſions ſudden Swoonings; and in this caſe a Scruple or half a Dram of Venice Treacle ſpeedily puts a ſtop to the evacuation; which I have ſometimes wonder'd to ſee in the Hoſpital upon the Preſcription of an old Phyſician.

The ſmoak of Turpentine thrown upon burning Coals, and received by the Fundament, cures an inveterate Looſneſs, a Dyſentery, a Teneſmus, a relaxation of the Anus, *&c.*

If perſons Ill of a Looſneſs Void a Saffron-colour'd bile, not unlike the ruſt of Iron diſſolv'd or red Bricks, it ſpeaks a Peſtilential humour, which will carry off the Patient, purſuant to the conſtant Obſervations I have made upon ſuch inſtances. *Cheſnau* l. 3. c. 6.

If a Looſneſs inſues upon Anger, 'tis a good Sign, but if the Looſneſs does not appear you may expect a Fever.

I have frequently obſerv'd, and indeed I 've heard it confirm'd by others, that in ſome Diſtempers, eſpecially thoſe of a Chronical Form, ſuch as the Phthiſick, *&c.* and

even

even in other Distempers, the sick Persons are taken, a little Time before their Death, with a Motion to go to Stool, and many of 'em Die in the very Time of the Evacuation. This deserves to be maturely weighed.

A bilious Vomiting is unlucky in the beginning of a Dysentery. *Hipp. Coac. Præn. Sect.* 3 *Num.* 62.

Most of those who Die of Dysenteries are kill'd by a Sphacelus of the Intestines, which appears at least three Days before their Death; for then the extreme Parts begin to grow cold, their Pulse is low and unequal, their Sense of thirst and their Pain is not so violent, and some of 'em turn delirious some Hours before they Die.

If a Dysentery without a Fever does not yeild to other Remedies, we must have recourse to the Tettuccian Waters, which if given according to Art, will infallibly compass the Cure. Of this I have seen two or three Instances to my great Admiration.

If the use of astringent Med'cines is followed by an Inflammation of the Belly, and a greater Difficulty in Stooling, Rhubarb ought to be frequently us'd, interlacing now and then some Anodyn Mixture made of the Syrup of Corn Popies, Water of Violets, Requies Nicolai, *&c.* By these Means you'll make a Cure.

In the Cure of a Dysentery be cautious of using too great a Medly of Remedies; your Med'cines ought to be few and simple. I have often cur'd Dysenteries with nothing else but Whey

given

given inwardly, and injected by way of Glyster: Nay several Authors take this for a great Anti-dysenterick *Arcanum.* Sometimes the Disease is inflamed by an over copious Injection of Glysters, by reason that they occasion a greater tumult in the ulcerated Fibres of the Intestines. They ought therefore to be given but seldom, and that in a small Quantity.

If a Dysenterick Person be taken with a Vomiting, 'tis a dangerous Case.

The Hickup is a mortal Symptom, and so is the Jaundice. A Difficulty of swallowing is the Forerunner of Death.

In a mortal Dysentery the Stomach is affected as well as the Intestines, and that is the Source of so many Evils.

The Pills call'd *De Caccionde* the Basis of which is Cashue are an admirable Anti-Dysenterick, only they must not be given in the beginning.

If a Dysenterick Person is seiz'd with an Inflammation of the Tongue, and a Difficulty of Swallowing, there's no hopes left.

If the Pain is not immediately followed by Excretion, you may conclude from thence, that the small Intestines are affected.

A Dysentery differs from the running Piles in this, that the Hemorrhoidal Blood comes before the Excrements, whereas the Dysenterick Blood either accompanies or comes after the Excrements.

If the Gut call'd *Jejunum* be affected, it prognosticats Death, by reason of the Vicinity of the Liver.

If a Dysenterick Person takes Opiats, and the Day after appears with another Colour in his Eyes, he'll scarce get over it; but if the Colour of his Eyes continues unaltered, 'tis a Sign he may recover. *Valschmid.*

You must not exhibit Astringents in the beginning; and *Crato's* Rule, is, not before the seventh Day.

Among the Anti-Dysenterick Med'cines we cannot but recommend tosted Rhubarb, Flowers of red Roses, and Nutmegs.

The Root of Hypecacuanha is a Specifick, and a Remedy almost infallible in the Dysenterick Fluxes, and other Hemorrhagies, Colliquations of the Humours, *&c.* Of this I was inform'd by the Learned Doctor *Sherard*, a noted Botanist and an excellent Physician in *England*, when he travel'd from *Rome* to *Germany* with my Lord *Townsend.* And not long ago I had the same thing confirm'd by Letters from the Excellent *Jo. Jac. Mangetus*, a celebrated Practitioner in *Switzer*-Land. But a full Description of this Root, may be met with in *Piso's* Treatise *de Plantis Americæ.*

Of an Apoplexy.

I.

There's a Necessity of distinguishing an Apoplexy, into the Sanguine and the Pituitous kinds. In the former Bleeding is of admirable Use, for by that means I have seen the Apoplectick Persons recover immediately. In the Pituitous Apoplexies, an emetick or a violent Purge prescrib'd out of hand is the only Remedy; upon which head I prefer the Powder of *Cornachini* and the Infusion of *Crocus Metallorum* in Wine. Some Appolectick Persons of the pituitous Class, have been entirely cur'd by taking a Vomit of this Infusion every Month.

In an Apoplexy the Illness runs higher or lower, in proportion to the greater or lesser Difficulty of Respiration If a Person once seiz'd with an Apoplexy is afterwards seiz'd with a Vertigo, he may expect to have his Fits again.

If after Bleeding the Respiration becomes freer and the Pulse in good order, it prognosticates a Recovery.

If a Glyster is thrown out an Hour after tis given, it is a good Sign, but if it does not come

away there's danger in the Case; for it speaks, that the Intercourse of the Spirits from the Brain to the intestinal Fibres is almost interrupted.

Glysters for Apoplectick Persons are to be given in a very small Quantity, to the end they may be retained and lodged longer in the Intestines; for if the Quantity be too large, they run out again: Indeed, if they are not retained when injected in a small Quantity, 'tis an uggly Sign, for it speaks the total Resolution of the Parts, and consequently the approach of Death.

A Fever seldom follows an Apoplexy, especially if it be of the Pituitous sort.

If a *Catochus* happens in the very Paroxysm of an intermitting or remitting Fever, no Remedies ought to be prescribed during the Fit; for here's nothing you can give, but what will injure the Patient, unless you make use of Fictions and Revulsions which I own to be allowable. Sometimes the *Catochus* disappears along with the Fit; but if it does not, you must let Blood immediately, or Purge according as the Indications are; but if it comes a second Time it brings Death along with it; Witness, the Learned *Dodonæus* in his *observ.*

Valesius has observed of Lethargick People, that the Pulse which was formerly low and little, becomes large upon the Accession of the Lethargy;

thargy; and the larger the Pulse grows the sooner the Patient Dies. In like manner *Rhodius* on *Septalius* tells us out of *Ballonius*, that in all sleepy Disorders, especially a Lethargy and Apoplexy, Death approaches, when the Pulse turns from little to great and increases sensibly in Magnitude. And I observed the same thing at *Rome* 1695, in the Case of an old Woman, who after she had been Apoplectick for four Days, had a large and brandishing Pulse about ten a Clock at Night, and Died about four the next Morning. This observation I seriously recommend to those who Practice Physick.

In 1694 in the Winter time, I observ'd in the Hospital at Rome, that when the Apoplexies were severe and already confirm'd, Blistering Plaisters did no Service; nay, all the Patients in that Condition Died.

Foaming at Mouth prognosticates Death in an Apoplexy, *Hip* 2. *Aph.* 43. *Tulp.* 1. *Obs. med.* 6, and *Forestus* 10. *Obs.* 74 in *Schol.* says, An Apoplexy is always a mortal Illness, but 'tis more such, if there appears Froth about the Mouth: And *Rhases* speaking of a violent Fever, says, 'Tis in vain to offer any Cure after they begin to Foam at the Mouth.

Apoplectick persons seldom get clear without the Resolution of some Part; and if all their Members are seiz'd in that Paralytick way they're soon carryed off; nay some fall into their Apoplexy again.

Those who are subject to an Apoplexy or a General Palsie, or are already seiz'd with either, are mightily troubled with Wind, Inflations in the Belly, and a rumbling Noise in the Intestines. Now, these Symptoms proceed from the Interruption of the Influx of the Spirits thro the Nerves to the Intestines and adjacent Parts: For the fleshy Fibres of these parts being thereby render'd Paralytick, and their tonick Motion almost sunk, the Vapours and Steams that exhale from the Contents of the Intestines assisted by the intermix'd Particles of the Air, heave up the abovementioned Parts into a flatulent Bulk, much after the same manner with a Dog's Ventricle, which swells presently upon the Ligature of the sixth pair of Nerves. The reason of this Phænomenon is accounted for at large in our Treatise *de fibra motrice et morbosa.*

Of Pain in generrl, of Convulsions and Convulsive Motions.

Such Pains as do not yield to Med'cines, Bleeding, or other means, turn to a Suppuration. *Hipp.*

If a Shivering comes after a fix'd Pain with a Swelling and great Heat in the Hypochondria, Breast, Spinal Marrow, or else where, 'tis a Sign of an Inflammation, and that the Humour tends to Suppuration. *Jacob. Comment. ad lib.* 4. *Coac. Hip.*

If the Pain is fix'd in one place, and do's not disappear upon the use of proper Remedies, let the

the part be where it will, burn it with crude Flax. *Hip. de affect.* 5. *speaking of the Sciatica.*

Such pains as grow easy without manifest signs are mortal. *Hip. in Coac.*

The Jovial Bezoardick is an admirable Remedy for allaying the raging Pains of the parts, and throwing out the peccant Matter by insensible Transpiration; but in the mean time you must take care, that these Pains are not Gouty, Venereal, or the like, the matter of which being retained might do more Mischief; you must likewise take care not to use this Med'cine in the Diseases of the Head and Nerves, for Tin is naturally an Enemy to the Nerves. However I have been oftentimes surpriz'd to find, that this Bezoardick is an infallible Cure in Hysterick Cases.

If Pains in any part of the Body are periodically exasperated, and return at a set Hour, the peccant Matter is not bred in the place affected, but is deriv'd from some other part: In such Cases a gentle purging Potion, exhibited three Hours before the time of the Invasion, is an effectual Remedy, especially if the Scene be laid in the Abdomen.

In Pains of the external Parts, when all other things prove ineffectual, you must have recourse to a Caustick. In this case I use to apply the Leaves of Crow-Foot, or a Mixture of quick Lime and liquid Soap. This Med'cine is extream serviceable in the Scatica, and other Pains: Witness, *Hip. Lib. De Intern. affect.* §. 19,

and *Lib. De affect.* §. 30. If the Pain is gathered up in one Spot, burn it; nay let the Pain be where it will, unless it be in the Spleen, you will still find Benefit by burning.

Tis manifest from repeated Experience, that the Pains of the Head arising from the Disorder of the Stomach, do chiefly affect the Fore-Head; and on the other Hand, that Head Aches springing from the Disorders of the Womb, fall chiefly upon the Crown and hinder part of the Head. Accordingly we find, Women who are subject to Hysterick Fits, use to have a Sense of Cold in the Crown of their Heads; and this I take to be the chief Diagnostick of an Hysterick Case.

If a place be affected with pain, and the Flesh of the part be at the same time Flaggy or wasted, burning is extreme seasonable. *Hipp. de Artic.* §. 54.

I have remark'd three or four times that the most obstinate Head-aches, which were even next door to madness, have been happily cur'd, when all other things prov'd ineffectual, by nothing else but the Powder *de Gutteta*, given to a Dram with Thea or with Broth impregnated with Cowslip Flowers, Betony, *&c.* Of this Powder See *Riverius Cap. de Epilepsi.*

There's nothing better against Head-aches or a heavy dulness in the Head, than bathing ones Feet in warm Water, when they go to Bed.

I saw

I saw very lately a Man of fourty Years of Age, cur'd of a very dangerous Head-ache, after trying all remedies in Vain, by the juice of Beet Roots, strongly snuffed up the Nostrils several times a day.

The Spirit of Salarmoniack mixt with the stale Oil of Sweet Almonds gives speedy and effectual relief in external Pains, and experience has taught me, that Spirituous Ingredients blended with those of an unctuous character are admirable Remedies against pains, and infinitely preferable to the Spirituous taken a part.

When the small Pox are just ready to break out, their appraoch is signified by convulsive Motions; nay if you find a Child seiz'd with a Fever that has not had the small Pox before, and observe convulsive Motions upon him, with a burning heat about his Loins, you may safely prophecy as I have done several Times, that the Small Pox will appear the next day.

According to the Histories of Diseases, some Children have the Measles twice or thrice; and indeed I once met with an instance of that Nature at *Padua*.

Those who are troubled with the Cramp, void for the most part great plenty of thin and clear Urine.

The Powder *de Gutteta* is a Specifick in Convulsive Disorders, as well as in the Megrim, Head-aches, heaviness of the Head, *&c.*

The Balsam of *Paracelsus* is a most potent Remedy for all Convulsions happening after Wounds, Punctures of the Nerves, *&c.* and indeed no Surgeon ought to be without it See the Description of it in *Paracelsus* his little Surgery.

Generally Speaking, the Convulsions of Infants spring from the Stomach, and thence it comes to pass that gentle Purgatives, particularly the infusion of Rhubarb, give immediate relief.

In Convulsive Distempers, thick and muddy Urine looks well; but thin and white Urine speaks no good.

There are three Med'cines, that have a just title to preference before any other in Epileptick and Convulsive Diseases; namely, native Cinnabar, Oak-fern, and Elk's hoof.

Your Children that have a scabby crust upon their Head, are seldom troubled with the Epileptick Fits.

Women taken with Convulsions after Miscarriage, find it a hard matter to get thorough, pursuant to my own Observation. Convulsions follow-

following a Frenzy are Mortal, according to *Aetius*.

In the disorders of the Nerves and the Head, the Powder of Cornachini takes place of all other Purgatives.

In Convulsive and Nervous Diseases Violets are a Specifick.

The Spirit of Sal-armoniack, curdles the Milk in the Stomach of Children; and for this reason, you must keep off from that Med'cine, when you have to do with Epileptick Children.

You'll find it worth your while, when a Child is taken with Convulsive Fits, to mind whether the Mother has her terms upon her or not.

Of a Cough.

I.

Coughs of long ſtanding diſappear upon the ſwelling of the Teſticles, and a tumor in the Teſticles goes off with a Cough: *Hipp.* 2. *Epidem. Sect.* 1. This remark furniſhes us with a growing Confirmation of the tacit conſent, I have ſo often mentioned, between the Privities and the Breaſt, as well as between the Legs and the Breaſt.

In Children a Cough ſprings a'moſt always from a Stomach ſtuff'd with Crudities; In which caſe we ought always to have a regard to the Stomach; but ſo as not to neglect the Pectoral Remedies.

A violent Cough uſes to produce a Rupture in Children, Miſcarriage in Women, and a Conſumption in Men; for which reaſon it ought never to be ſlighted.

Milk is an admirable Remedy in a dry Cough, ariſing from the acrimony and thinneſs of the humours. In this caſe I uſe to preſcribe Milk boil'd with the broth of Meat or Violet water.

If

If an obstinate Cough, attended with a Fever, is proof against all Remedies, it tends to a Consumption, even when there's no spitting of Blood in the case. When the Cough retains to other Distempers, you cannot compass the Cure, without curing the Diseases 'tis tack'd to.

If a Cough happens in a Fever, the Fever will not be perfectly cur'd, while the Cough lasts.

Dry Coughs and a roughness in the Throat, are occasion'd by a Northerly Wind. *Hipp. Aph.* 5. *Sect.* 3.

I have sometimes observ'd that a violent Cough seated in the Lungs, and communicated to the Head, will occasion a surprizing loss of Memory and Reason, as well as a Palsy in the Hands, and other Members. *Boyle de Util. Philos. Nat.*

If Dropsical persons are seiz'd with a Cough, it portends a fatal end. *Aph.* 35. *Sect.* 6.

I've found by Experience, that in a dry Cough when all other Remedies are fruitless, there's a great deal of benefit reap'd from Crab's eyes exhibited to half a Dram in the Decoction of Purslain, Coltsfoot, and Violet leaves.

In a pectoral Cough, your common Remedies prepared from the pectoral Herbs are much more serviceable, than the long-winded Compositions of the Shops. Repeated experience justifies this Truth.

Physicians get no credit by administring Purgatives in a Cough, especially that of the pectoral form; nay, if the Cough is occasion'd by unseasonable Weather, they do more harm than good.

Pectoral Coughs are wont to be exasperated by Purgatives, witness *Etmullerus*; but a Purge may be granted in such Coughs as have their source in the Stomach, and are accompanied with a notable Cacochymical Disposition in the Blood.

Bolus's made of fresh Butter with Sugar, and exhibited at Night, pacifie the most violent Catarrhous Coughs.

Lobelius's Syrup of Hedge-Mustard is likewise very Serviceable in a Cough and a Hoarsness.

We learn from Dr. *Willis*'s Authority confirm'd by repeated Experience, that the best Remedy against the Convulsive Cough of Children, is a Decoction made of the Fern of Trees, especially that of the Oak, which is likewise beneficial in other Convulsive Disorders.

The

The Spirit of Harts-horn is of admirable use in the most violent Coughs.

Of the Stone and the Gout.

I.

The Stone and the Gout murder the Rich more than the Poor; and the Wise more than the Foolish.

The primitive Parents of the Stone and the Gout, are, Wine, Venery, Sloth and Intemperance.

Their Antidotes are the drinking of Water, the use of Milk, Sobriety and Exercise. Accordingly we see that *Zechius* made a mighty secreet in his consultations, of a pint of warm Water taken down immediately before dinner: Nay *Piso* and *Alexander* recommended the same remedy many Years before *Zechius*, affirming that after the voiding of the first Stone, they never saw any more Bred in those who continued the use of warm Water, for a considerable Space of time.

'Tis almost in vain to prescribe any Remedy to the Gouty, unless they be very temperate in

in the use of Wine and Venery, and avoid both Idleness and hard Drinking.

You may distinguish Rheumatick Pains in the Loins, from those of the Nephritick Form, by the following Sign which never fails. When the Patient raises and extends his Body after bowing it to the Ground, if the erecting is perform'd with difficulty and uneasiness, and a Sense of being, as it were, cut thro' the middle, you may rest satisfied that 'tis no Nephritick pain, but a Rheumatick Ilness occasion'd by sharp and briny Salts conveyed to the part in a Serous Humour.

In these Rheumatick pains of the Loins, I have met with great success in administring every Morning about a pint of Milk Thea: And perhaps the same remedy would not be amiss in the case of the Gout or the Stone.

If the abovemention'd Signs attend Nephritick Cases, and be accompany'd with pains upon the external Muscles of the Back Bone, we then look for external Impostthumes; but if the pain rages more inwardly, it prognosticates in like manner inward Impostthumes. *Hipp. Sec. 7. Aphor. 36.*

Eating Musk Melons, and drinking the Water distill'd from their Pulp, either cures, or considerably benefits, in the Gout or the Stone, provided the measures of discretion be observed in the use of Wine, Venery, and Exercise

Pre-

Prepar'd Hog-Lice give present relief, in a supression of Urine, and are of use to break the Stone.

If other Remedies are ineffectual in a fatal Suppression of Urine, let the Patient be well cover'd and supported by two or three by-Standers, in order to fetch several Turns up and down the Room; For *Sydenham* is evidence that by this means large Quantities of Urine have been procur'd.

The pains of the Kidneys, proceed chiefly from five causes; namely, a Flux or down falling of a Sharp and Corrosive serous Humour, an Ulcer, an Inflammation, an Imposthume, and the Stone.

In Nephritick Cases, if the Patient is seiz'd all on a sudden with a sense of something pricking, and as 'twere stinging him in the Region of the Ureters, 'tis a certain Sign of the Stone just falling on that part.

After Bathing, and particularly the disappearing of the pain, if it returns with the same Violence and Vomiting the next day, sooner or later, you may rest assur'd that the pain is Nephritick. *Chesnau.*

The Drinking of Mineral Waters expells and prevents the Stone; and if these cannot be conveniently come at, you may supply their

Room with a Decoction made from a large Quantity of Eringo Roots, after it is a little bruis'd. If you dilute White-Wine with this Decoction and drink plentifully of it, you'll find it a very powerful Remedy against the Gout and the Stone; Witness *Chesnau.*

A stone in the Bladder uses to appear like the pain of the inward Piles, but the pain of the former is much more Violent than the latter.

Sometimes we meet with a Stone in the Bladder without any supression of Urine; and for that reason a supression of Urine, cannot be given in for an infallible Sign of a Stone in the Bladder.

That sort of Urine, that has a great deal of Humour or Matter at bottom, is apt to breed the Stone. *Avicenna.*

If the Patient handles his Yard frequently, if he has a Motion to Stool when he begins to piss, if he walks in the Streets open and as it were bandy Legg'd; from these three Signs, you may certainly conclude upon a Stone in the Bladder.

Among other Remedies calculated for the Stone and Gout, Tea and Coffee merit the first Rank. In a wandring scorbutick Gout all the Preparations made from the Pine Tree are of use, particularly, Pine Water, the Essence of Fine, the extract of Pine and the like; Witness *Valschmid.* In

In the very Paroxysms of Nephritick pains, Lithontriptick and Aperient Med'cines do more harm than good; but on the other Hand, we reap benefit, from the Emollient, Laxative, and Anodyne Remedies, which unbend and mitigate the painful contraction of the Kidneys and adjacent parts, for by that means the Stone gets into the Ureters with greater facility.

I met lately with an Instance of an Arhritick Person at *Rome*, who got rid of his illness upon voiding a large Quantity of thick gross Urine, that turn'd soon after to the consistence of a Jelly.

Those who Vomit frequently, and have the benefit of an open Belly, are not so lyable to the Stone; and accordingly we find the use of Glysters and Gentle Purgatives, is very beneficial both in the Stone and the Gout. This I have frequently observ'd, particularly at *Rome* in the Year 1693 in the case of a Gouty Person that was seventy Years Old. He was raised up by two servants, and carried in the Morning to a place of conveniency for going to stool; but the Evacuation was no sooner over then he walk'd back without help, affirming that his joints were rendred freer and nimbler by going to Stool.

In most cases we find that the Gout lays its first Scene in the great Toe. 'Tis impossible for those, who ply Venery and Wine intempe-

rately, to 'scape one of the two; I mean the Gout or the Stone.

If Gouty Persons are in such a Condition as admits of no other Exercise, it would be proper to exercise their Voice, either in reading aloud, or talking, or singing: *For Plutarch* in his Book *de tuenda valetudine* reckons up constant talking and singing, among the several Kinds of Exercises; upon which Head you may consult our Treatise of the *Tarantula*. *Chap.* 13.

The chief Sign of a Stone in the Kidneys, is a fixed pain in that Region accompanyed with a continual Vomiting; all the other Signs are uncertain, and common to the other pains of the Abdomen.

The most certain Sign of a Stone in the Bladder, is its being touch'd by a Catheter; for there's no other Signs, but what may impose upon the best Physician that is.

For an *Arcanum* against the Stone remember Mr. *Boyle*'s distill'd Water of Arsmart.

Sometimes there is a Stone in the Kidneys without any Pain in that part. I have seen two Instances of this Nature, one at *Boulogne*, the other at *Padua*; in the dissecting of whose Corps I found large Stones in the Kidneys, notwithstanding they had never been troubled with Pains in that Quarter. *Hollerius* in his Practice *cap. de Hydrop.* makes the same Remark:

mark: *In dissecting a humane Body*, says he, *I found the left Kidney wasted and full of Matter, and the right one fill'd with a Stone, tho' the Person had never complain'd of Pain in those Parts.*

Thus far I have endeavourd to Chalk down the History of Diseases in a concise Style, by the way of scatter'd Sentences, recommended and approved by aged Experience: This I've done to point out the way by which the Practice of Physick may reach the due pitch of Perfection. For the purpose: This loose and Aphoristical Way of describing Diseases is of infinite Service to Practitioners. In the first place, it presents them with a faithful and clear physical Knowledge, and such as springs from the Bosom of Nature, which may be look'd upon as the first Gloss, or a perpetual Paraphrase in directing the Cure of Diseases. In a second place; in pursuing this Method, we keep clear of the Errors of those, who, following their Scientifick Method in the Definitions of Diseases, *&c.* do either leave out or wrest a great many of Nature's Precepts that fall not pattly within the Verge of their Method. By this means they perplex the true Sense of Nature, and droppingthe Kernel and Marrow of Sciences, amuse themselves with the sorry Remains of dry and empty Compendiums. The third Observation that offers it self upon this Head, is, That these Aphorisms or snug Sentences being not the wither'd and spurious Trunks, but the genuine and jucy Roots of the History of Diseases, they likewise disclose the true Indications to be minded in the Cure, which a Methodical

Disquisition can scarce do; for there one part gives Light and Colour to another in a circular Way, and the gratifying of the Understanding is more in View than doing Justice to the Nature of the thing. A fourth Advantage accruing from our sententious Way, is, the paring off a great part of that Labour and Study, we are wont to employ in polishing and imbellishing Sciences by the severe Laws of Method: I mean, in making the artful Deduction and Connection of parts, in setting forth the Hypotheses upon which the Matter is rear'd, in amassing great Store of imbellishments, and such other recommendatory Trappings, as serve more for Ornament than for Use. Such are the severe Bonds of the Schools, which squeeze out the Truth, and wind up meagre and wither'd Triffles. Now, by describing Diseases in scatter'd and straggling Sentences, we avoid both these and many other Inconveniencies. This sort of Sentences may be compar'd to a Looking-Glass of Metal, which does not reach the due Representation of Images 'till 'tis polisht to the last degree; for in like manner our Aphorisms, having undergone the File of repeated Experience, afford a just Representation of the Method of Cure, pursuant to the genuine Image of Nature. Among those who stand up in justification of this Truth, we meet with the Divine *Hippocrates*, a Man that blended his Learning with Prudence and Discretion, that built much upon Experience and Observation, and courted neither the jargon of Words nor the Pageantry of Method, but singled out and dis-

disintangled the true Nerves of the Science. My Lord *Bacon* takes the same Side of the Cause in his Book of Morals, where we find him speaking to this purpose. "As in the way of Life, "the Actions of Men lye straggling without "Compactness or order, so scattered Hints "and Instructions are most serviceable; for "the methodick Way of treating Sciences, "brings in the Art in an entire and coherent "Body, upon which Men turn so secure, as if "they had already canvast its highest Mysteries. So far my Lord; but 'tis needless to insist upon a Subject that lyes almost beyond the reach of Dispute.

CHAP. X.

Of the various Ages and Progress of Physick.

SECT. I.

HAving thus detected and gone through the chief Hindrances in the way of Practice, we lye under an Obligation of going yet further. If we bend our Thoughts upon the several Ages of the Practice of Physick, I mean its various Progress, Heighth and Declension, we'll meet with little to brag of; abating for those happytimes of the *Grecians*, in which the Practice of Physick flourish'd, and was almost at its Meridian. For tho' the *Grecians* did but prattle idly in forming Systems of Philosophy, and pin'd all their Judgment of natural things upon noisy Disputes (excepting *Democritus* and his Followers, who tacitly rip'd up Nature without opening the Schools;) yet in fixing and promoting Physick they acted a very wise Part, and truly shewed themselves to be Inventors: So that this is the only Nation upon Earth, that by a certain national Right lays claim to the Glory of the most solid Knowledge of Physick. Of this Truth we have an illustrious Instance in the School of *Coos*, an eternal Monument of which is at this Day known to us under the Title of the Works of *Hippocrates*. *Cælius Aurelianus*,

lianus, *Aretæus*, and the other *Grecians* who liv'd in the succeeding Ages down to *Galen*'s Time, are farther Proof. But in the Time of *Galen*, or at least soon after, the *Roman* Empire being broke in upon by the fatal Power of the barbarous Nations, not only Physick, but even the other glorious Monuments of Ancient Arts, were almost bury'd; and their calamous Fall continued unrepaired to the Time of *Charlemaigne*, nay, even to the tenth Century. Physick having wandered without a Guide or Light in that wide extended Desart of Time, stumbled at last upon the Pipes and Reeds of the *Arabs*, who converted the active and masculine Science of the *Grecians*, into an exercise of Wit and fund of Disputes, acting the part of Children who are apt to prattle, but unqualified to beget. 'Twas chiefly upon these Considerations that the Celebrated *Fuchsius* razed their Learning to the Ground, as appears from his Institutions, *Lib.* 5. *cap. ult.* and *Fernelius* trading in his Footsteps, prefac'd to his King with the following Invective against the *Arabians*, "The *Arabs*, says he, passing into *Italy*, "through a Channel of Barbarity and Filth, "bred Apothecaries and Mountebanks rather "than true Physicians; and raising all their "Conclusions upon naked and empty Words, "without the Sinews, without the Laws of "Demonstration, have left the World a Le- "gacy of Jargon and Noise, but little or no "Instruction. They delivered the Rules of "Evacuation in such a cloudy and inconstant "Way, and dip'd them so deep in the Obscu-

"rity

" rity of Controverſies, that the ableſt Phyſi-
" cians are often at a Loſs to know what
" ſort of Remedy they would be at." So far *Fernelius.* And what he has ſaid of the *Arabs*, may be applyed with equal Juſtice to the other barbarous Schools.

II.

After the *Arabians* had continued their unjuſt monopoly for ſeveral Years, Phyſick thus toſs'd and ſhatter'd with ſo long a Storm, fled at laſt to the *Italians*, in hopes of a kinder Harbour. The *Latins* being long unacquainted with Sciences, ſnatch'd up the firſt Books that came to Hand; and thoſe were either written, or adulterated and corrupted, by the *Arabians.* This *Arabian Contagion* did ſo unhinge and ſink their Minds, that for a long time, they utter'd no Words and harbour'd no thoughts, that did not reliſh of their Learning; nay, the plague made a ſpeedy March even to foreign Univerſities, and particularly thoſe of *Spain*; for at that time all the rays of Sciences ſprung only from *Italy*, and foreigners conſulted her as an Oracle. And if we take a narrow View of the Books and Studies of the Phyſicians that liv'd from the eleventh to the fifthteenth Century, we'll find 'em to be nothing elſe, but undigeſted Medleys cull'd out of the *Arabian* and *Grecian* Authors, Commentaries and Gloſſes in order to unfold their genuine Sence, and at laſt a perplexing of Phyſick, inflam'd with Theory, and ſuch like ſlender Appendages. The *Italians*, particularly

Mr.

M. Fab. Calvus, Martianus, Septalius, &c. were the first that shak'd off the *Arabian* Yoak, and used their utmost efforts to restore the primitive Wisdom of the *Grecians* with reference to Physick. After them the *French* imbark'd in the same design, particularly *Duretus, Ballonius, Hollerius, and Jacotius.* These worthy Authors manag'd their Provinces with such distinguishing Excellency, that if they did not go beyond the *Grecians*, at least it must be own'd they chalk'd down the true Method of Cure according to their prescriptions. This Doctrine being communicated to a'most all the Universities in *Europe*, it excited at the same time other learned Men, to inlarge and confirm it.

III.

Scarce had the Practice of Physick arriv'd at this State of Tranquillity, when the upstart *Paracelsus*, back'd by all the gang of Chymists, raised a new Tumult, and laid fresh cloggs upon the true Practice. Nor was this long past, when *Helmontius* with his Retainers inlarged its troubles, in so much that all the Conclusions of natural things were chain'd down to a Chymical Furnace. It must be own'd indeed, that these two Noble Authors have considerably inrich'd the Practice with a new invention of Remedies, which all Physicians ought cheifly to have in View; and have done very good Service in Striking out some prejudices, that had crept into Physick, through the ignorance of the *Arabian* and false Interpreters. But when both the

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one and the other take upon 'em to account for the causes that give Rise to Diseases, and the *Phænomena* that accompany 'em; being propossess'd (themselves) either by the reading of Books, or the flirting Experiments of the Furnace, they lay all their Stress upon the Philosophical Hypothesis of their own three Principles, without ever descending to practice, or making their remarks, whether the Historical progress of Diseases, and the Efforts of Nature in promoting or opposing 'em, are exactly answerable to their Arbitrary Opinions. By this means it came to pass, that they not only disturb'd the repose, that Physick then enjoyed, but likewise were forc'd, tho' against their Will, to see in their own practice the very Errors they had censur'd in the Galenical; for their design did not rest in unhinging the false Method used by the Gleanists in the prescription of Remedies, which indeed wanted to be corrected; but it extended to the exploding of the Remedies themselves, namely Bleeding, Purges, Blistering plaisters, and the like, as being useless and pernicious to Mankind. Now whether this proceeded from ignorance, or from Spite to the contrary Sect; 'tis still certain, that in this Age it has raised so much confusion in Physick, and such differences and feuds among Physicians; that instead of a regular and correct Practice, we meet with nothing but a hungry Barrenness, starv'd with want and wasted with contention, which at once robbs us of the Liberty of thinking and Judging, and drives us a long way back from the true Path of Instructive Nature.

IV.

IV.

No sooner was the Chymical bustle pacified, than Practice was brought into fresh trouble, by so many new Systems of Philosophy, that this fertile Age has produced: I mean the *Cartesian*, the *Democritan*, the Mechanical, the Physico-Mechanical, and an infinity of other Systems; the Founders of which and their Retainers, tho' unacquainted with the first Elements of Physick, had nevertheless the self-sufficiency to dip into that Science, and form Conclusions of the History of Diseases from their Speculative Institutions. In imitation of them the Physicians became altogether Philosophers, and being allur'd with the tranquillity of Abstractive Wisdom, rais'd up a contentious and wrangling sort of Philosophy in the Room of the Practice of Physick, which can't well be sever'd from a Bed of Sickness. And considering, that for almost fifty Years last past, the World has been so much amused with Novelty, that very few have applied themselves to solid and attentive Practice; we cannot think it strange, that the numerous Physical Books publish'd with in that Space of time, have nothing in 'em but pure and abstractive Philosophy, at a time, when the Conclusions form'd upon the Motions of Nature are tumbl'd down and shatter'd, and the very Principles of Practice are handled down in such perplexity, that the most accomplish'd Physicians are at a loss to determine, what Positions to entertain, what Author to credit, and what course to steer in pursuing

suing the cure of Diseases. Upon the whole, if we maturely Weigh the present state of Practice, we'll find it under violent Commotions, and extremely perplex'd with lean and empty Axioms, and some false general Positions, deriv'd either from the divers Sects of Physicians, or the prepostrous Laws of Method, or from the favorite Notions and prejudices peculiar to each Physician. If we measure its Age from the foregoing observations, we'll find it still within the very boundaries of Childhood, and that very little time has been spent in improving it; for setting aside the happy times of the *Grecians* in which Med'cine flourish'd and was almost at a stand, the *Arabians* trampled it under Foot, and the *Latins* indeed better'd its Condition, but did not improve it much and; so of the rest.

CHAP.

CHAP XI.

Of the Sources of Theory and Practice.

SECT. I.

A Physician can never recover his ascendant over Nature, without a Dutiful Obedience; for Nature is conquer'd by obeying and humouring her, I mean in the way of Practice by Observation, and that of Theory by Dissection; and in regard the Basis of Theory is lodg'd in Philosophy, that sort of Philosophy must illustrate the Theory of Physick, which dissects Nature, and makes a due separation of its parts. Such was the View of *Democritus*'s School, and of a great many experimental Philosophers of this our Age, whose Industry has without dispute enrich'd the Modern Theory, with a vast Stock of certainty. It being therefore once known and acknowledg'd, of what importance Observation is to Practice, and Dissection to Theory; the Mind being constantly equipp'd with subsidies from each, will form Indications of cure that may be depended upon for a Certainty, and last unshaken thro' all the Periods of time, abating for what allowance is to be made for the Unconstancy and Vicissitude of things.

II.

'Tis an ancient Proverb, that the Drinkers of Water cannot entertain the same Sentiments

ments with those who drink Wine. And indeed it hits the Physicians nicely, they being now divided into such various and opposite Sects: For we may say of 'em what *Sir Francis Bacon* applies to the Philosophers, That many of 'em, both Ancient and Modern, have swill'd down a raw sort of Liquor, such as Water, which either Sprung naturally from their own conceptions, or was pump'd up, like Water out of a Well, by Logick. So that 'tis no wonder if their Sentiments are vastly different from those of *Hippocrates* and his Followers, who drank and transmitted to Posterity a Liquour darwn from an infinite Number of the Grapes of Observations, and those gather'd in bunches in due season and in time of Maturity, squees'd in a Press, purg'd and clarified. In earnest, these sagacious Men were sensible that the Diseases of human Bodies can't be appeased by the abstracted Opinions and Systems of the Brain, to which the industry of Men should be nail'd down as to a Pillar: They wisely perceived that the stooping of our Genius to real things, the conquering of Nature by submission and Obedience, and the stubborn Patience of Observation, do bring to light such Precepts as will be own'd by all the *Posse* of the Physical train to be the fix'd Standard of Health.

III.

Hitherto Physick has been too curious and minute upon empty trifles, it has been senseless and severe in contemplating and commenting upon the Works of a few Men; and dull

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and short-sighted in tracing the Effects of Nature and of Diseases. No wonder then, that being still cramp'd within its ancient bounds, 'tis at a loss to fix upon any thing that is certain, with reference to the consummate History of Diseases; as well as the Indications, Remedies, and Precepts peculiar to each Distemper. We can't think it strange, that being in this Condition, it should still run further into confusion, and be as 'twere myr'd. 'Tis no Surprisal, that while 'tis exalted with the Fumes of Speculation, it undergoes the same Fate with the Statues and Idols of the Heathens, to which Homage and Adoration is pay'd, tho', at the same time, they neither are mov'd nor receive any benefit. Whereas, on the other hand, the Mechanical Arts that glory in Experiments, grow and improve every day. These General Observations being thus premis'd, we come now to enquire what Improvement the Ancient and Modern Physicians have added either to Theory or Practice; and how far either of these can reach in the due Cure of Diseases.

IV.

The Theory of the later Authors, is much more certain, than that of the Galenists. For the former is grounded upon Experiments made with diligence and repetition, and drawn from the Storehouse of Natural Philosophy: It lays down, and demonstrates the Causes and Symptoms of Diseases, not by uncertain Conjectures, but by Mathematical Truths, that shine as clear as the Sun; and has carry'd

the Demonstration so far, that what became Barbarous in the Hands of the Barbarians, and was call'd in question by the learned World, does now shine in a clear Light, the Cloud of Ambiguity being happily dispell'd. On the other hand, the Galenical Theory does not only seduce weak Minds from the true Road of Practice, by an idle Train of Questions; but by a nauseous Repetition of Things already said, a Barrenness of Invention, and an Ostentation of Logical Quibbles in refuting and retorting Arguments, covers its Practice with the greatest Obscurity, and tacks the Cure of Diseases to uncertain and obscure Indications. Hence it came to pass, that such Indecencies, Absurdities, and scandalous Feuds, have at all times prevail'd among *Galen*'s Sect. As for the later or Modern Physicians, as I have already done Justice to their Theory, so I can't but prophesie, that a regular and successful Character will attend their Practice in time to come. There is scarce any Science, but what in these our Days does, by the singular Bounty of the Almighty, boast of Repose and Ease, after being so long toss'd, and advances very considerably; only the Practice of Physick, by I know not what fatal Mischance, lies still mew'd up in its ancient Limits, and lags far behind the Theoretick Part.

V.

The Galenical Practice is infinitely preferable to that of the Moderns; for if we consider the shrewdness and importance of either their Diagnosticks, Prognosticks, or Cures, tho'

tho' blended with such dregs of Theory, we'll find 'em worthy of Commendation. This Happiness of our Ancestors in the way of Practice, seems to be only owing to that immortal Patience in making Observations, by which they firmly resolv'd to adjust all the Periods of the History of Diseases; and that not faintly, or by starts, but in a grave, discreet, and mature Order. And the Light of Nature and Experience being constant and perpetual, the Observations deriv'd from thence, could not but gain a further Confirmation and Approbation, in so long a Series of Years. This we observe in a distinguishing manner in *Hippocrates*, who, like an inspir'd Prophet, foreseeing the risque that Physick would run, if destitute of mature and repeated Observations, was the first that trod the Path of continu'd and heap'd Experience; and, in his Enquiries after Nature, consulted rather Nature her self than his own Thoughts. By this means, he conducted the Physical Tribe to the true Springs of Diseases. But the Moderns follow'd another course, having, by virtue of Dissections and Experiments made upon Natural Things, attain'd some Certainty in the way of Theory, they fancy'd that this Theoretick Certainty would redound to the History and Curative Conclusions of Diseases; without apprehending that these requir'd a new and peculiar Exercise. Being buoy'd up with this Fancy, they not only bent all their Thoughts and Labour upon the Theory alone; but, which is yet worse, they form'd Conclusions of Practice from the Rules of Theory, and, by confounding the one with the other,

perplex'd the whole Art, and gave occasion to the pernicious Errors that Physick groans under at this day. 'Tis the Office of Theory to give the Reasons of the *Phænomena* that accompany Diseases; to make a just Comparison between the antecedent, and the concomitant Spmptoms; to trace the occult Causes of Diseases, and the true Source of these Causes; and, in fine, to explain and account for several other things of that Nature; by which means the Physician may be enabled to proceed more openly in adjusting the Indications, and depart from the precarious Measures of Empiricks. But the peculiar Business of Practice, lies in managing the History of Diseases, in judging of the Administration of Remedies, and the Satisfaction due to Indications, and adjusting all the weighty Concerns relating to the Cure of Diseases, pursuant to the Laws of Experience. He who pursues a contrary Course, and promiscuously forms his Notions of Practice from the Rules of Theory, will never be a happy Practitioner. But give me the Man that diligently peruses the Writings of the ancient Practitioners, that retain'd to the School of *Coos*, and with his utmost Efforts imitates their singular Solidity of Practice; I'll warrant you he'll be a Friend to Truth. Let me advise you, young Men, to reject evil Counsel, and manfully pursue this noble Study; the Study of the ancient Practice, from which, as from liberal Fountains, we derive all our Knowledge of Practical Wisdom; and indeed we meet with no Piece of Learning that's either more useful, or more praise-worthy.

VI.

VI.

As for the other Head of Discourse, whether Theory or Practice is of most use in the Cure of Diseases; you must know in the first place, that the ancient *Græcians* were Strangers to the Subdivision of Physick into Speculative and Practical. This fatal Division was first minted by *Ferain*, an *Arabian* Doctor, that was either bewitch'd with the Pleasure of Speculation, or scar'd with the Labour and Drudgery of Practice in compiling the History of Diseases, and tracing their obscurest Causes. And soon after he was blam'd for it by *Alcorazoen*, as *Averrhoes* informs us, *Tract* 1. *Part* 1. *super Cauticos.* In earnest, 'tis no strange thing that this Division is not mentioned in the Monuments of the *Coan* School, and of the ancient *Græcians* down to the time of *Galen*; for as I said above again and again, the Professors of that School laid down this for a Certainty, That as Physick took its first rise from Observation, so 'twas to be learn'd and apply'd to publick use by the means of Observation: And what we now perform by the Rules of Theory, was acted by them only by a quickness of Apprehension confirm'd by long use; by virtue of which they adjusted the Indications of Cure, after a narrow Survey of the Observations they had formerly made upon the Nature and History of Diseases, and seriously accommodated to the benefit of Man. In the mean time, up starts the Empirick Sect, which exploding all Theory, and disclaiming all manner of Reasoning in the Verge of Physick,

trusted to Experience alone in the Cure of Diseases; and this their Experience was not repeated, but stupid and supine; not found out by a Thread of Design, but dropt from Chance, and Mountebank all over. By this means Physick was over-run with such numerous and prodigious Absurdities, that she had sunk intirely, if *Galen* had not appear'd on her behalf about the first Century of Christianity, and stem'd the Current of growing Error with a speedy and present Remedy; I mean by instituting, or rather prudently and vigorously confirming a Sect of *Rational Physicians*. This Society, which I call *Rational*, stood upon two Pillars, namely, Reason and Observation; but at that juncture of time the greatest deference was pay'd to Reason; partly, because they were afraid of stumbling upon the Errors they had charg'd upon the Empiricks, that went upon false Observations; and partly, in regard that the nimble and clean way of Reasoning, aspir'd to by *Galen* and his Followers, took more with the World, than the harsh, patient, and repeated way of Observation injoin'd by the School of *Coos*. So, from that time, there arose a sort of distinction between the *Reasoning* and the *Observing* Part of *Physick*, which came to be more frequently took notice of in the insuing Ages; till at last the *Arabians* brought in an open Divorce under the Heads of *Speculative* and *Practical*, which continues to this day. This Speculation or Theory, being all of it rear'd upon some Philosophy or other, the Tenets of which were the Standard of its Rules, it has been diversified in proportion to the variety of Philoso-

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phical Systems; and thus has the Practice of Physick had so many various Turns and Shapes. *Valesius*, a very learned Author, interlac'd his Writing here and there with several Practical Precepts; and, perhaps, would have inserted more, if his vigorous appearance on the behalf of Logick, had not put him upon determining the History and Cure of Diseases, by the Rules of that wrangling contentious Art. The same Charge lies against *Argenterius*, *Massarias*, *Mercatus*, and most of the *Galenists* that flourish'd in the Three Centuries preceding the last; particularly *Capiracius*, whose Works are sharply censured by *Gasp. Hoffman*, upon the abovemention'd score. But in this Age, in which natural and experimental Philosophy has been happily pursu'd and improv'd, and the Theory of Physick grounded upon it; who would not think that Practice is thereupon set in a true Light, and recommended with a due Confirmation?

VII.

Since Physicians began to examine the Structure and Actions of a living Body, not by Physico-Mechanical and Chymical Experiments, but by Geometrico-Mechanical Principles, they have not only discover'd an infinite number of things that were unknown to former Ages; but have made it out, That a Human Body, as to its natural Actions, is truly nothing else but a Complex of Chymico-Mechanical Motions, depending upon such Principles as are purely Mathematical. For whoever takes an attentive view of its Fabrick,

he'll really meet with Shears in the Jaw-bones and Teeth, a Phiol in the Ventricle, Hydraulick Tubes in the Veins, Arteries, and other Vessels, a Wedge in the Heart, a Sieve or Straining-holes in the Viscera, a Pair of Bellows in the Lungs, the Power of a Leaver in the Muscles, Pulleys in the Corners of the Eyes, and so on. And tho' the Chymists explain the *Phænomena* of natural Things, by the Terms of *Fusion*, *Sublimation*, *Precipitation*, *&c.* and so make a separate sort of Philosophy; yet all these ought to be imputed to the Force of a Wedge, Balance, Leaver, Spring, and such like Mechanical Principles. Now, since the natural Effects of an animated Body can't be accounted for with greater Facility and Clearness any other way, than by those Mathematico-Experimental Principles, by which Nature speaks her own Mind; I am likewise of the Opinion, that the preternatural and morbifick Effects can't be demonstrated with more Certainty and Evidence than by that same Method; and so I conclude, that the Theory which stands upon such Principles, ought to be reckon'd more certain than all the rest. Indeed if all Diseases sprung from the disorder of the solid Parts, the Origin and Causes of the preternatural Effects we meet with in them, would questionless be easily pointed to by the abovemention'd Principles: But considering that the greatest part of 'em owes their Origin to the various Complexion of Fluids, we must not be surpriz'd to find, That the true and genuine Cause of Diseases, can never be found by Theoretick Philosophical Principles. For the ablest Philosopher and

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the greatest Master of the best Hypothesis that is, will be forc'd to acknowledge, after all his Meditations and Labour in tracing the true constituent Parts of any Humours, That the *Minima*, or least Particles of any Humour of the Body, whether natural or sickly, lye beyond the reach of all Art and Speculation: And all the Advances of Physicians upon this Head are nothing but Wild-fire, that do not so much as touch upon the Substance of the thing. But after all, tho' the true Configuration and Texture of such Humours is unknown to us; yet in the way of Practice, 'tis sufficient that we have learn'd by Experience the various Progress, Exit, and Declension of their Motions; for being excited and directed by Nature, they unfold to us the true Springs of Indications, for the exhibiting or shifting of Remedies. Now, these Truths being premis'd, we can't but confess that the Art of curing Human Bodies is acquir'd only by Use and Exercise; and consequently, that Practice is of more Importance than the Theory, to the Cure of Diseases, (which was the second Head of Discourse.) The subtiler a Mathematician is, he runs the Divisions of Nature finer; and therefore I would not have you to take all your Conceptions of Physick to be Truths, till they have stood the Test of Practice. What repeated Experience recommends to you for a Truth, that you may always depend upon as such. You can't judge whether Wine is good or bad, without tasting it: He'll ne'er make a perfect Musician, that does not practise singing; nor an accomplish'd Soldier, that never visits the Field. Men

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hatch a great many things in their Closets, that they take to be reasonable, and indeed certain; but when they descend to Use and Practice, they find 'em to be not only absurd, but in a manner impossible. And, on the other hand, how many things are there (especially if we talk of Cures and Remedies) that upon their first Proposal are branded as useless, and inconsistent with Reason; and that either because they do not jump exactly with our Hypothesis, or because we know of no probable Reason to inforce 'em: And after all, when we put 'em upon the Foot of Practice and Experience, we find 'em both useful and certain. Upon the whole, 'tis to be hop'd that Physick would receive much more considerable Reinforcements, if in time to come the World would allow to Theory and Practice their respective and peculiar Claims.

CHAP. XII.

A Method propos'd to Young Beginners, of forming a just Hypothesis of Diseases.

SECT. I.

SUch Things as are grounded upon Nature, improve and come to Perfection; but that which has no other Root but Opinion, varies, and fails of Increase. A notable Instance of the latter we have every Day in the Physical Matters, that are built upon an uncertain and purely opiniative Hypothesis. Nay, if

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we were to make a strict Enquiry after the chief Impediment that has contributed more than any thing else, to our not having any certain and standing System of Physical Matters, we'd find it to be this, That Physicians would not join and duly sute the Force of their Mind to that of Experience. *Cesalpinus*, a very acute *Italian*, made the first Discovery of the Circulation of the Blood, and reckon'd the Circulation was perform'd in the space of 24 Hours, as he tells you at large, *Quæst. Peripat. Lib.* 5. *Quæst.* 4. But in regard 'twas only a Pointedness of Thought that led him to this noble Invention, and that he never consulted such Anatomical Observations and Experiments of natural Things, as were proper for improving the Thought; we can't think it strange that he left the Discovery unfinish'd, and, like a Dialectick Combatant that confided too much in the Strength of Wit, fell short of the Victory. *Harvey* taking notice of this, resolv'd to consult not only Reason, but Experience upon the Head; and with that View he tortur'd Nature with Experiments, and teas'd her with Anatomical Dissections, till he forc'd her to confess the Truth. Thus did he, beyond the Expectation of Mankind, compleat the immortal Invention of the Circulation, by a sort of mixture of Reason and Experience. The Discovery thus finish'd, flew speedily like a Messenger of Truth across the Seas, and over the *Alps*, and coming with admirable Celerity to the Knowledge of all the Universities and Colleges of the whole Physical Orb, was entertain'd and approv'd of *nemine contradicente*.

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For this reason, I presume, 'twill not be like the Winds, which tho' violent in the Quarter from whence they come, are broke and lower'd when they reach the remoter Regions; but will undergo the same Fortune with the great and huge Rivers, which are large indeed at the Head, but receiving perpetual Supplies in their progress, inlarge their Channel, and swell higher the further they go from the Spring.

II.

The Knowledge that Practitioners have hitherto boasted of, has been the product of Opinion, and not Nature. To pass over other Instances in silence, we shall only touch upon a Fever, concerning the Essence of which there has been so many Hypotheses contriv'd in this Age, that a Man of Sense cannot but be stunn'd when he thinks on it. *James Sylvius*, in conjunction with all *Bentekoe*'s Followers, was of Opinion, That Heat is not the Cause, but the Effect and Symptom of a Fever, and that a quick Pulse is not a Sign of the swifter, but of the slower Motion of Blood; so that he plac'd the Essence of all Fevers in the Coagulation or Incrassation of the Blood. Going npon these Topicks, he banishes bleeding and cooling Remedies from the Cure of Fevers; and, on the other hand, recommends spirituous and volatile Ingredients, and such as dissolve the pretended Coagulation of the Blood; and these he prescribes promiscuously in all Fevers, and in all the Periods of the Distemper. These Absurdities he runs to, in pursuance of an Hypothesis that sprung from his

his own Brain, and not from the History of Matter of Fact. *Helmont* and *Campanella*, whose Tenets are much the same, asserted that a Fever is not a Disease, but the Remedy of a Disease, call'd up chiefly by Nature, in order to throw out a peccant Matter blended with the Humours. For this reason their chief Aim in the Cure of all Fevers, was, to feed and increase the febrile Fire, by healing Remedies, and such as, to use their own words, corroborate Nature, and enable her to dislodge the Enemy that hangs upon her Shoulders, with greater Facility and Expedition. *Henricus Screta* reviving the Opinion of *Diocles*, when buried almost in Oblivion, derives all Fevers from the Inflammation of the Viscera; and upon the consideration that an Inflammation presupposes an Obstruction in the Vessels, or, as he speaks, a hindrance to the Circulation of the Blood, he condemns bleeding, purging, and such other Remedies as cool and moderate an overbearing Heat in the Blood; and throws the whole Cure of all Fevers upon dissolving, spirituous, and Alcholine volatile Remedies, or such of that Form as discuss the pretended Obstruction and Inflammation of the *Viscera*. The *Cartesian* Philosophers invented a new Hypothesis of Fevers, in pursuance of their own Principles: Their Sentiments were, that in a natural State the subtil Matter ranges continually thorough the Blood with great Celerity, and passes through its Pores in a strait Channel; by which means it produces and feeds the natural Fermentations in the Humours: But if it so falls out that these Pores are put into disorder, and stuffed with

with a grosser Substance, the swift and continued thorough Fare is thereby oppos'd; upon which this Matter undergoing a violent Agitation, raises most vehement Motions in the Blood, in order to recover its wonted and clear passage thorough that Mass. Now, this violent Commotion in the Blood is by them call'd a Fever; for the Cure of which, they recommend such Remedies, as by their spirituous slender Particles are capable to discuss, dissolve, and throw out by Sweat, or the other ways of natural Evacuation, that gross, thick Matter, that stuffs the Pores of the Blood, and makes them depart from a streight Line, By this means, say they, the subtil Matter obtaining a clear passage, ranges thorough the Substance aud Pores of the Humour, not impetuously, but gently and in compliance with the Laws of Nature.

III.

I presume no body is unacquainted with the Hypotheses of *Sylvius de le Boe*, *Bontekoe*, *Braanen*, *Jones*, *Piens*, and a great many more, that appear'd first on the North-side of the *Alps*: Nor can any Physician be ignorant of the Opinion of the *Galenists*, who in explaining the Essence of a Fever, being prepossess'd with a false prejudice, that the Humours of Animals were capable of Putrefaction, did not stand to affirm, that the greatest part of Fevers derive their Origin from the Putrefaction of the Humours; and being impos'd upon by the vulgar Opinion, That Humidity is the Mother of Rottenness, declaim so violently against the drinking of Water in Fevers, that they would suf-

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fer their Patients to run the greatest Risque, rather than to allow them one drop of Water; and accordingly we have a great many Instances of Persons that dy'd of Fevers, in which Water was prohibited, whose Heart and Lungs were found to be dry and wither'd. These things premis'd, 'tis obvious, that among so many Opinions and new Inventions of this Age, the Nature and Cure of Fevers is so far from being illustrated and asserted, that it is rather perplex'd and cover'd with Confusion. The Fever rages and burns still; ay, it burns both in the Schools, and in the Patients Houses; and the World would have groan'd under the spreading of that dismal Fire, if one Author, among so many, had not shone out in this Age, I mean *Thomas Sydenham*, the Imbellisher and Ornament of our Profession, who laying aside the Fictions of Opinion, applied himself wholly to Observation, and dwelt with Nature from his younger years to a good old age; by which means he at last disclos'd a more probable Hypothesis of the Nature of Fevers, and a more plausible Method of Cure; nay, his Learning and Sagacity was so much distinguish'd in the curing of Fevers, that his Country-men commonly call'd him, *The Doctor for Fevers*. This I have been several times inform'd of, by the *English* Gentlemen that travel into these Parts.

IV.

Whoever takes a narrow view of some of the Hypotheses of the Moderns, and the Groundwork they go upon, will perceive plainly, that what these Authors had in view, was to please and

and gratifie the World with a new sort of Speculation, or else, that they were ignorant of the Rules that are proper to be observ'd in the contriving of such Schemes: For to instance in the Nature of Chylification (which will afford us a sufficient Taste of the rest) this Age has produc'd as many Hypotheses upon that Head, as there are Experiments from the Chymical Furnace, or the Philosophical Laboratory. Both the Chymists and the experimental Philosophers have observ'd, that from the mixture of two or three Bodies, there sprung a third of a whitish Colour, affirm'd that the Chyle is elaborated in the Ventricles, and dispos'd to assume the Nature of Blood by an Artifice of the same Nature. And, which is yet more pernicious, they drew from these external, and, perhaps, fortuitous mixtures of things the Indications of Cure for Crudities, Inappetency, and the other disorders of Chilification, which ought to have been deriv'd from the aged Observations made upon such Diseases and their Symptoms. But besides the falsity of the Assertion, that the Concoction, Separation, Dissolution, and other natural Functions perform'd in the Viscera, observe the very same Measures with those of a Chymical Furnace; this unseasonable jumping, from two or three Experiments of any Nature whatsoever, to the forming of general Systems, does not only block up the way that leads straight to the unfolding of any thing, but drowns the Practice of Physick in fresh Errors every day.

V.

I would not have any one to think, that this harsh way of treating the Hypotheses of the Schools, speaks me an Enemy to all Hypotheses. For, not to mention that I have always pursu'd that Study, and recommended it to others, provided they be exactly answerable to the Laws of Nature; my chiefest view in this Performance, was to establish a stricter concord and union between Observation and Hypotheses than we have yet met with. 'Tis true in giving my Sense of Hypotheses, I talk in this first Book harshly, and almost indecently: but that I was mov'd to, partly by the extravagancy of the Physicians of this Age in hatching such Inventions, and partly, by the preposterous application of such arbitrary Schemes to the Cure of Fevers. The Ant gathers and applies its whole Collection to use: Just so do the Empiricks, who hunt up and down for Experiments, and those neither confirmed by repeated Observation, nor weigh'd in the Balance of clear Reason; and soon after make use of them without distinction. The Spider spins all its threads out of its own Body, without gathering Materials from abroad; and the same is the Practice of the speculative Physicians, who may be justly call'd sophistical. But the industrious Bee behaves it self better than the rest, it gathers indigested Honey from the Flowers, and then digests and ripens it in the little Cells of its Viscera; and, in fine, works upon it with great toil and labour, till 'tis work'd into the highest degree of Perfection. Now, in our Profession, we want that sort of Physicians which

imitates the Bee: for some of them treat Nature only by way of abstraction, till they come to the potential and shapeless Matter; others again insisting too much upon Particulars subject to their Senses, but not examin'd by Reason, are sometimes so perplex'd with the confusion of things, that they contemn some things as being beneath their regard; and others they dread, as being too difficult, and beyond their reach.

VI.

When I consider the Power and Effects of the Imagination of such Authors, as have a wonderful Propensity for the minting of new Hypotheses, I observe they're drove upon the Study of Innovations, chiefly by two Motives; namely, either the prospect of purchasing that Glory that is wont to be liberally bestow'd upon new Discoverers of Things, and Inventors of Opinions; or else, from their disappointment in plodding a long time upon Books, in order to find out some probable Reason for things, without meeting with satisfaction; which puts 'em upon canvassing the Subject in their own Thoughts, and coining Reasons to themselves. And if it happens that these new-coined Reasons please any part of the learned World, they soon after endeavour to enlarge their Stock of Glory, by rearing upon 'em an intire System of the Universe, or of some whole Art. Now these Men being endow'd with a strong Imagination, can't hear of another Man's Opinion, but maintain their own stiffly, and take it to be more certain than all the rest. If by Reading or Experience they light upon any thing,

thing, that gives but the least countenance to their Hypothesis, they not only adopt it, and twist it in with their own System, but cry it up mightily as being a thing of the greatest Certainty imaginable. But, after all, that violent Passion for establishing their own System for ever, confounds the Ideas of the Mind a thousand ways, and very often represents to 'em the Objects of things, not such as they really are, but such as they would have 'em.

VII.

But for the purpose. If you would have a perpetual and standing Hypothesis, of necessity it must proceed not from the Author's Noddle, but from the things themselves, and must have an exact connexion with Observations, and the fix'd *Phænomena* of Nature. A Specimen of this Truth, we have, among other Philosophers, from the Astronomers. The Hinge of all Astronomy turns chiefly upon this, that from Observations first made upon the *Phænomena* of Celestial Bodies, the Intellect should afterwards rise to Theory, or to Hypotheses nicely agreeable to the Rules of Geometry; that from a full and mature survey of these Hypotheses, they may be able to foretel and adjust the Motion, Situation, and Conjunction of these Bodies. Accordingly, the Astronomer's first care is to purchase a long Series of Observations; after which he aspires to Theory, in order to assign 'em a probable Reason. Tis true, the Astronomers have form'd several Systems of the Heavens, and those contrary to one another; namely, the *Ptolemaick*, *Copernican*, *Tychonick*, *Semi-Tychonick*, &c. But in predicting

dicting the *Phænomena* of the Stars, and computing their Motions; that is, in foretelling Eclipses, the various Aspects of Planets, *&c.* they all keep close to the truth, and do not differ a bit from one another. Now the Mystery of the Matter lies chiefly here, that, tho' a particular Astronomer may form in his own Mind a peculiar Theory of the Stars, yet all their Theories are drawn from the same constant Observations of the Celestial Bodies; for whatever one observ'd, is likewise observ'd by another. 'Tis only the reason (going by the name of Theory) why these Bodies appear and move after such a manner, that depends upon the Will of Men, and accordingly uses to be as various, as there are various ways among several Men of thinking and explaining themselves: So that tho' they disagree as to the Reason and Theory, yet considering that every one'sReason is grounded upon the very same Observations of Celestial Bodies, 'tis no wonder they all agree in the Prediction of Truth.

VIII.

Practical Physicians ought to follow the Example of the Astronomers, in forming the Hypotheses of Diseases: This they will be able to do, if they be once acquainted with the Language of Nature, and its ways of Expression; that is, if they have been long employ'd in observing the Events of what is beneficial, and of what is hurtful. After that aged Observation has given them to know, that in such a Disease such a thing always happens, and that after a determin'd manner; then is the Season of raising their Thoughts to form an Hypothesis, and

fix

fix it upon the foresaid constant motions of Nature, in producing or curing this or that Distemper. This Truth is not only verified by Experience, but vindicated by Dr. *Sydenham*, in adjusting the Hypothesis of the hysterick Illness. This Author is of Opinion, that the hysterick Illness takes its rise from the broken and languid condition of the Spirits, upon which they fly out into Effervescencies and irregular Motions, and produce hysterick Convulsions, together with the adjoining Symptoms. The excellent Dr. *Sydenham* did not cull this Hypothesis from his own Fancy, as Men commonly do; but after a frequent and repeated Observation, that Bleeding, Purging, acid Syrups, and such other Remedies as enervate the Blood; That Grief, Watchings, Fasting, Food that gives ill Juice, and such like Causes, did either occasion or exasperate the Distemper; and, upon the other hand, that Steel, *Venice* Treacle, exhilarating and spirituous oily Med'cines, Riding, staying long in the Country, Wine impregnated with bitter Herbs, and the like, did either totally extirpate or mitigate the Disorder: Upon this Observation, I say, he did not stand to assert and form an Hypothesis, that hysterick Fits proceed from the broken and almost drooping Spring of the Spirits, and the Mass of Blood, its being depauperated, and stript of its nobler and balsamick Part. He steddily affirm'd, and made it out by Experiment, that the Indications of Cure ought to be fetch'd from this Hypothesis.

IX.

Considering the chief view of an Hypothesis, is

is to assign the reason of the *Phænomena* of Diseases, that so the Mind may proceed with more Freedom and Clearness in singling out the Indications of Cure, 'twill therefore be equally necessary, that it be grounded upon some general and most evident Principle, that's common to all things. Now such a Principle can be nothing else but Figure and Motion: For Figure is still such as it really is, whether it be perceiv'd by sense or not, or whether it be perceiv'd aright or amiss. And as for Motion, since there is no such thing as absolute rest in corporeal Beings, and that all Bodies enjoy their particular motion, to which they owe all their Alterations, for better or for worse: Upon this Consideration, I say, it can't be, but that the Reasonings grounded upon these two primary Qualities of Bodies, are entitul'd to a greater Certainty, than others that are tack'd to a Principle of a quite different Nature. This appears in the Modern Theory, which being founded upon the Laws of Mechanicks, Figure and Motion, affords a happier, and more certain Solution of the *Phænomena* of Diseases, than the Theory of the *Galenists* that was pinn'd to the empty Fictions of first or occult Qualities. And here, in confirmation of the foregoing, as well as of the present Thesis, I must take notice by the bye, that tho' several Hypotheses may be form'd concerning the breeding and curing of Diseases, which are infinitely different, and sometimes feign'd, as it were, for diversion; yet while all of 'em appeal to the same standing and continued Observations of Diseases, they must all be equally happy as to the Cure, which makes a Parallel to what I observ'd but now of the Astronomers.

X

X.

'Tis certain that Practice springs from a mixture, as 'twere, of Reason and Experience, and is confirm'd by the same: But in order to manage this Matter happily, and without Error, 'twill be necessary, above all, to take care that the one does not incroach upon the Prerogative of the other; that is, that the Power of adjusting and forming Judgments of Diseases, be allotted to Observation alone; that Reason or Hypothesis be allow'd the Province of solving the *Phænomena* of Diseases, and giving Reasons for the apparent motions of Nature. For my own share, I stick to an Hypothesis, as long as I find it exactly answerable to the Footsteps of Nature; but if it swerves never so little from that Standard, I presently drop my Theory, and follow Nature, which is always the best Guide. For considering that the specifick alterations and depravations of the Humours, peculiar to every Disease, lye too too remote to be reach'd by humane Thought; we are forc'd to point our Cure, not to their essential Nature, but to their more general Cause; varying our Method now and then, either upon the spontaneous Advice of Nature, which it uses to give in the eradication of Diseases, or upon our own repeated Experience, which gives us certainly to know, what Method is most proper to conquer such or such a Distemper. In the mean time, be it known to young Physicians, that there cannot be a more certain Sign of the Truth of Hypotheses, and certain ways of Reasoning, than that of a happy Success in the Cure of Diseases, when

regulated by their Prescriptions: If we find it otherways, we must not lay too much stress upon 'em. Those who neglect this Caution, will fall into pernicious Errors, and give fresh Provocation to the ignorant Mob to upbraid the Physician with Ignorance.

XI.

'Tis not Opinion, but certain and demonstrative Knowledge, that will do our business: We must not dispute, but effectually try what Nature acts or will bear; and what we cannot reach by Speculation, we must not presently brand for an Impossibility in Nature, and so reproach Nature with the Infirmity of our Art. We must bend our Thoughts with all diligence and constancy, upon the discloſing of new Methods and new Rules for curing the Distempers we call incurable: for tho' some of 'em are in effect incurable, yet the greatest part are only such, not from the Impossibility of the thing, but from our Weakness. History is evidence, that they have been cur'd several times by other Physicians; and I see no reason why the Cure should not last as long as the Distemper. We ought likewise to employ our selves, in finding out new Means and new Measures, for the happier and easier Cure of the Diseases, that are commonly call'd curable. Let us display our utmost Efforts, that Life may be Prolong'd, or that a Method may be found to keep back old Age; that the true Nature of the Blood, and other Humours, or their genuine constituent Parts, may be sometime set in a clear Light; and that, either by Analogy with other Animal or Vegetable

Liquors,

Liquors, or by the help of a Microscope, when they are just taken out of the Body, and spread upon pellucid Glass ; or by some other Analysis that may be more proper. Let our Care be to comfort and refresh our Patients in the very Agony of Death ; for 'tis the most scandalous thing in the World for a Physician, to turn his back upon a Disease as incurable, and bid adieu to his Patient, Two or three days before he dies. We ought still to try new Remedies, and shift about upon several sorts, to the very last gasp : for while the Soul hovers within the Body, there is still some hopes to be plac'd in our admirable Art. In fine, we ought to make it our earnest business to find out specifick Remedies, and such as will infallibly answer every Distemper, not to mention the Infinity of other things that are still wanting in our noble Profession ; to the end that God, the Creator of all things, may enrich the Family of Mankind with new Blessings thro' our Hands.

CHAP. XIII.

The great Importance of establishing Precepts, or certain and constant Rules, to be made use of, as a Standard, by a puzzled Physician in the ambiguous Events of Diseases.

§. I.

THO' we have shown in the foregoing Chapters, that Theory and Hypotheses are necessary both for tracing the Causes and Effects

Effects of Diseases, and for a Directory to Method; nevertheless when we come to the sick Man's Bed, we find they frequently frustrate our Hopes, in pointing to a Method of Cure; nay, sometimes we find our Patient benefited by what either is, or seems, contrary to the very Circulation of the Blood; which, undoubtedly is the surest Hypothesis that is. For this Reason I am of the Opinion, that nothing can be more conducive to our Profession, than the daily Investigation of new Heads of Precepts or Sentences, confirm'd by long Use and mature Experience, with reference to the Diagnosticks, Prognosticks, and Cure of Diseases; for they not only seldom impose upon us, and that for the Reasons mention'd above, *Cap.* 2. §. 7, 8. *& seq.* but discover to us at first view, and without the long-winded Turns of Theory, the true and perpetual Indications of what's to be done. Nor is this Opinion of mine the Fiction of a timorous and doubtful Mind, but the very Method of Writing and Teaching, observ'd by *Hippocrates* in all his Books, and after him constantly pursued by all the wisest Practitioners. If that great Man had not been fully assur'd, that this preceptive Method was preferable to all others, and more conducive to the benefit of the Sick, and the confirmation of Physick; questionless, he would never have stuck so close to it, both in the course of his Practice, and the tenor of his Writings. In imitation therefore of his Example, I purpose here to lay down some Precepts, which I know to be certain, either from the best Authors, or from repeated Observation in divers Hospitals of

Italy.

Italy. These will serve as a Pattern for young Beginners, by which they may take their Measures in tracing new Precepts every day. They are as follows.

In the beginning of acute Diseases, Purgation is pernicious, especially if perform'd by violent Catharticks. 'Tis in vain to object, that many Fevers are stifled in the beginning, by exhibiting a Purge; for if we consider the Matter narrowly, such Fevers are only gentle *Synocha's*, or such as arise from Food of bad digestion taken in too plentifully, and stagnating in the first Passages. Such Fevers as are truly acute, do not come to a Period so soon; for according to *Hippocrates*, their Crisis appears much about the 14th day; and, in regard the Cause of acute Fevers is in the beginning of the Disease confusedly blended with the Mass of Blood, and deeply immers'd in it (which the Ancients call'd the State of Crudity) and consequently unqualified for depuration; if you exhibit a purging Med'cine in that juncture, you'll either evacuate what is not to be evacuated, or kill the Patient; or, which I have frequently observ'd, exasperate the Fever, and make it double instead of simple, and produce an infinite number of other Symptoms, that either were not before, or at least were much milder.

Further: In the beginning of acute Fevers, you must avoid not only Purgatives, but likewise volatile Diaphoreticks, and such other impetuous Med'cines: for at that time the Blood being over and above inflam'd, and altogether disabled for depuration, by reason of the Crudity and Confusion of the peccant Matter

Matter that puts it into agitation, 'tis irritated and set on fire by such Remedies; upon which it repairs with a precipitant course to the Head, or the other Viscera, and there produces fatal Stagnations, or many other Symptoms that did not appear before; such as Deliriums, Watchings, symptomatick Sweats, Anxiety, Anguish, Thirst, and the like. For my own part, I've observ'd nothing more frequent after the exhibiting of a Purge, or any other impetuous Med'cine, than the exacerbation and reduplication of the Fever.

In Inflammations of the Pleura, Intestines, Bladder, *&c.* if the Pain abates of a sudden, while the Fever and other Symptoms increase with an intermitting and low Pulse, know for a certainty that a Delirium will come in the space of a few hours; for it speaks that the Disease is turn'd into a Gangrene.

II.

I have frequently observ'd, that such Pleuritick Persons, as came to have Impostumes in their Ears, were all cur'd.

Those who in the beginning of a Fever had a motion to vomit, and thro' the negligence of the Physician, or the impotency of weak Nature, did not actually vomit, I have found frequently to be seiz'd in the progress of the Distemper with severe Loosnesses.

In an obstruction of the Viscera, if the Face keeps up its natural lively colour, you may readily undertake the Cure; for such Patients may easily be set right. But if the Face is very much alter'd, and the whole Body is o-

ver-run

ver-run with an universal Paleness and Leanness, avoid to meddle with 'em if you can; for 'twill be a hard matter to cure 'em. However, the Case is quite different in a Cancer of the Womb; for then the Face keeps to its natural colour, and the Cheeks are of a rosy red colour.

In a Peripneumonia, if the Fever, Cough, and such other Symptoms are exasperated the Fifth day, the greater the exasperation is, the more assurance you have that Death will ensue on the Seventh.

If you are troubled with sour acid Belchings, abstain from Wine, and you're cur'd: Instead of Wine, make use of Water impregnated with Anise-seed and Cinamon. After you're well, you may return to Wine again.

III.

In the Case of a Sciatica, if you exhibit a Purgative (Syrup of Buckthorn with Wine I commonly use) at the very hour of the first Invasion, or at least a few hours after, you'll find that after the Operation of this, or at most another succeeding Purge, is over, the Patient is certainly cur'd. But this will not hold, if the Disease is of several days or months standing.

In all Diseases whatsoever, be sure you always mind the Tongue; for that affords a more certain and naked view of the state of the Blood, than any other Sign. All other Signs do frequently mislead us, but this seldom or never; and unless the taste, colour, and other qualities of the Tongue return to their

natural

natural state, if you consult your own Credit, you'll never think the Patient well.

As many days as the beginning of the Fever lasts, the same will be the duration of the Increase, of the State, and of the Declension. And if the beginning be violent, malignant, or impetuous; or, on the other hand, mild and favourable; the same in proportion will be the Character of the other Periods. So that a diligent and mature examination of the beginning of the Disease, is the only Fund from which we can take our Prognosticks of the duration or event of a Fever.

When Spots appear in Fevers, take care you make no effort upon the first Passages: for at that time even Glysters are much suspected.

The later that the Spots appear, and the nearer to the *Status* or heighth of the Distemper, they're so much the better; for then the Disease tends to a Crisis and Concoction. And the eruption of the Spots ought to be promoted again and again with Bezoardick and Diaphoretick Med'cines, taking care in the mean time to avoid a Looseness by all possible means. On the other hand, if they appear in the beginning of the Illness, they bear an ill Character; for they denote a great fusion and dissolution of the Blood.

In intermitting Fevers, if the second Fit is more violent than the first, and the third very gentle, you may depend upon it, the Fever will disappear about the fourth Fit. If the fourth Fit be very violent, and the fifth much slacker, the seventh gives an entire Solution of the Fever. If a Patient dies of an intermitting Fever, he expires commonly about the beginning

of

of the Fit: We have very few Instances of those who die in the Increase, Heighth, or Declension.

In intermitting Fevers, the Urine is very red, and of a Brick-colour; nay, Urine of this colour, is almost a certain and peculiar Symptom of such Fevers. If the Urine be of a deep red colour, and drops a Brick-colour'd Sediment when expos'd to the Air, let the Form of the Disease be what it will, you may rest assur'd, that it derives its Origin from the Ferment of intermitting Fevers. This I've observed again and again.

IV.

In several Diseases Remedies do more harm than good; and benefit is reap'd from motion and exercise in the Country-air. 'Tis the constant Remark of all the most learned Physicians, that some obstinate and chronical Diseases, especially those arising from Passions of the Mind, and Grief of long standing, admit of no speedier Remedy, than riding in the Country-air.

In a very obstinate bilious Colick; in a Phthisick accompany'd with a melting Looseness, and the other Symptoms of a desperate Case; in inveterate, hysterick, and hypochondriack Disorders; in a word, in all chronical Diseases, and such as arise from an obstruction of the Viscera; after all other Remedies are tried to no purpose, we find nothing better than riding out upon Horse-back; first, for a few Furlongs, and afterwards many Miles, and that chiefly in the morning and clear sunny weather. This is religiously acknowledg'd by the excellent Dr. *Sydenham*, and was mention'd long before him

him by *Hippocrates*, *Lib. de Diæta.* 'Tis no Objection, that the Patient is too weak, and so low in strength, that he cannot be mov'd in his Bed; for in that Case, the Exercise must commence first in a Coach, for a few Furlongs, and so proceed gradually to riding on Horseback, and that for several Miles. For by this sort of Exercise occasion'd by riding, the Viscera of the Abdomen are gradually shak'd and jogg'd; the jogging of a Horse falling all upon the lower Belly of the Rider, and the rest of the Members being very little affected. By virtue of this repeated Succussion, the languid and almost flagging Spring of the Fibres is retriev'd; the diminish'd or obstructed motion of the Humours and Spirits is rouz'd up; and what Viscidity sticks to the Glandules of the Viscera, recovers its lost Circulation. Now, the Ferments of the Viscera being thus restor'd and exalted by a continued course of Riding, not only their concocting Faculty, but even the Secretion of the Humours, is put upon the primitive and healthful foot; and the peccant Matter that has so long hung upon 'em, is thrown out by such Passages as Nature finds convenient. I ought not to conceal this Secret of Exercise in the way of riding from the Citizens of *Rome*, where the Atmosphere is almost perpetually clogg'd and foul'd with moist cloudy weather, and consequently has but a small elastick force; so that 'tis no wonder, that it commonly occasions a loose Flagginess in the solid Parts of the humane Body, and a sluggish inactivity with a sort of clamminess in the Fluids. 'Tis for this Reason that the three Diseases, describ'd by the Learned *Petronius*, *de*

Victu

Æstu Roman. rage chiefly in this City; I mean, a constant heavineſs of the Head, a Wearineſs, and a coſtive Belly: From all which 'tis manifeſt, that in the Air of *Rome* the motions both of the ſolid and fluid Parts become too languid; and that this Air will ever be the bane of the health of the Inhabitants, unleſs they call up and increaſe the motion of the Humours and Spirits, by exerciſing themſelves abroad; that ſo the Humours and Spirits may have a clear paſſage thro' their Pipes, and the Tone or Spring of both being thus retriev'd, Concoction and Secretion may be perform'd in the Viſcera, and other Parts of the Body, purſuant to the Laws of Nature.

V.

'Tis an ugly Sign, if about the beginning of the *Status* or the heighth of the Diſeaſe, the Urine being reddiſh, and much loaded with great plenty of excrementitious Contents, changes gradually to a pale and thin Conſiſtence; if the Pulſe becomes quicker, weak, and almoſt wavering; if the Tendons ſtart, eſpecially while the Pulſe is felt; if Talkativeneſs, fearful Dreams, and ſuch other Symptoms appear. For in that condition, you may expect the ſpeedy arrival of fatal Symptoms in the Head; namely, Deliriums, Watchings, Coma's, and even diſorders in the other Parts; but above all, the change of the Fever into that of a malignant Form.

In Fevers, the ſtrength of the Spirits is known to a certainty from the Pulſe; ſo that if the Pulſe be ſtrong and equal, we always have good hopes, notwithſtanding the appea-

rance of Deliriums, Convulsions, Tremblings, and the other perverse Symptoms of the nervous Family. On the contrary, if the Pulse be very quick, weak, and wavering, tho' all the other Symptoms promise a Recovery, we are always apprehensive; for generally such a Pulse is the Harbinger of Death.

As long as Feverish Persons spit, they are out of danger, in continual as well as intermitting Fevers. A foul Tongue is always suspected.

With respect to the *Phænonema* of a Fever, 'tis better known than any other Distemper; but with regard to its Constitution and Cause, 'tis the least known of any.

In a Cachexy or a Dropsie of the Breast or Belly, if a ruddy and indifferent good colour of the Face, shifts on a sudden to a wan Lead-colour, the Patient will die suddenly in the space of a a few days, or a month at most.

The Children of great Men, are oftner killed with an useless load of Remedies, than with the force of their Illness; especially if their Illness is acute. Let me advise you, in such Cases, to use but few Remedies, and even those with Prudence and Caution.

VI.

If a spontaneous Diarrhæa, or an acute Fever comes upon a Fit of the Iliack Passion, the Patient will die in a short time.

If a *Gutta Serena* follows an Apoplexy or Epilepsy, 'tis a sign of Death, or at least of the vehemence of the Disease.

In the Iliack Passion, the stronger Remedies you give, whether Purgatives or sharp Clysters, the

the more you constipate the Belly; for these increase the frizzling and contraction of the Fibres: But Anodyne, Emollient, and Dissolving Med'cines are beneficial.

If an Iliack Fit is attended by a Suppression of Urine, Strangury, Hickup, Inflation of the Belly, or Convulsions, the Disease is mortal.

Madness and Melancholy are so near allied, that oftentimes Madness turns to Melancholy, and frequently the beginning of Melancholy relishes somewhat of Madness; as the learned *Dodonæus* has well observ'd.

When Women are ill of a Gonorrhæa, or under their menstrual Flux, they have a livid Lead-colour'd Ring under their Eyes; which may be reckon'd one of the Diagnosticks of the Diseases of Women.

In acute and dangerous Diseases, a low, quick, and (as 'twere) staggering Pulse, is oftner follow'd by Death than by Recovery.

In acute Fevers or Diseases, the Urine, call'd *Subjugal* (that is, resembling the gross, muddy Urine of Oxen) is always a Sign of disorders in the Head. If when this sort of Urine comes, the Pulse is low and weak, and the Patient is sleepy, or affected with a heaviness in the Head, you may prognosticate from thence that some sleepy Distemper, and particularly a Lethargy, is just at hand. But if that Urine is accompanied with Watchings, Head-aches, Thirst, a parch'd Tongue, a burning Heat in the Bowels, and the like, you may foretel that a Delirium, or Convulsions, or the other disorders of the Nerves will be upon him presently. Tho' this *subjugal* Urine is an ill Sign in acute Diseases, 'tis a good one in some chronical

Distempers; particularly, a Rheumatism, Gout, *&c.*

Some are wont to be troubled three hours before Dinner with disorders in the Stomach; particularly, a Pain in the Stomach, Wind, Crudities, *&c.* And in such Cases, I have experienc'd the specifick Vertue of *Quercetanus*'s Stomachick, given at that very time to half a dram in a Dish of Coffee; especially if the Constitution of the Body be moist with viscid Humours; and above all, if the Person lives intemperately. The Tincture of the Bark of Sassafras-wood, extracted with Spirit of Wine, and given at that hour, to two Spoonfuls, or even repeated several times a-day, dispels Wind in the Stomach, almost in a minute of time: And the same is the Vertue of the Tincture of Ground-Ivy drawn with the same Spirit.

Oil of Mint is beneficial in all the Diseases of the Stomach.

The Hectick Fever of pocky Persons, tho' it seems to be desperate, is very easily cur'd, by carrying off the Seeds of the Pox with Specificks proper for that Disease.

In the continual Fevers of Women in Childbed, if they are seiz'd with a difficulty of breathing, 'tis always dangerous; for most of 'em die.

Among all the Signs of a dead *Fœtus* in the Womb, given in by Authors, a *Tenesmus*, or frequent Inclination to go to Stool, is the most certain, and next to infallible.

A Jaundice happening in Fevers, is always monstrous; and such Fevers are seldom without Malignity.

Sweet things are improper in Fevers; so you ought

ought to avoid the use of Sugar; for it inflames the Disease, especially in Children, or in hypochondriack or hysterick Persons.

In malignant Fevers, above all things, mind the Eyes, Tongue, and Hands; a foul Tongue and trembling Hands are always dangerous in acute Diseases.

In the malignant Fevers, in which the offensive Humour is to be expell'd from the Center to the Circumference of the Body; before the Expulsion, there's a difficulty of Breathing, and great Anxiety in the Breast, which decline by degrees after the Expulsion is effected. This I have frequently observ'd in spotted and scarlet Fevers, in the Measles, Small Pox, and the like.

In a Plague, the sooner the Bubo's break out, the better for the Patient; for by that means the internal Parts are kept clear of the Contagion.

The Itching of the Nostrils, is an infallible Sign of a simple *Synocha*; and so is a gentle moisture upon the Skin, according to *Walschmid*.

I've observ'd several times, that a *Lipyria* Fever (*i. e.* that in which the outward Parts are cold, while the inward burn) disappears immediately upon the accession of a *Cholera*: But not so upon the appearance of Sweat or Urine; for which reason Diaphoreticks and Diureticks ought to be cautiously us'd in such Fevers.

I never saw a bleeding at Nose succeed well in a Spotted Fever; especially if it be attended with many grievous Symptoms.

In Fevers occasion'd by the alteration of the Air at *Rome*, I've observ'd that Sleep insued upon bleeding in the Arm; but not so in the Foot.

I made this Remark in the Hospital of *Rome*, in Summer 1693. That in acute Diseases, most of those whose Blood drawn by Venesection had a white chylous Crust upon it, recover'd; and those dy'd, whose Blood was very rutilant, or had too red a Surface.

I commence the Cure of all acute Fevers, by letting Blood, being taught so to do by Experience; for I have frequently observ'd, that the Bleeding was follow'd with a Sweat that eas'd the Patient.

In malignant Fevers, Bleeding in the Arm inflames the Disease, and turns its whole Force upon the Head; whence insues soon after Deliriums, sleepy Disorders, *&c.* But bleeding in the Foot is beneficial. This Observation I made at *Rome* in the Hospital.

A Caustick apply'd to the Legs, cures the *Gutta Rosacea*, and other Redness of the Face, when all other Remedies are ineffectual: Witness *Mercurialis Lib. de decoratione, Cap.* 13. And this Observation I had given me as a mighty Secret by a very learned Physician at *Padua.*

In the Diseases of the Face, Purgatives are the principal Remedies; as we are taught, not only by Experience, but the Divine old Gentleman, *in Coacis*; where he speaks to this purpose: *The Belly being mov'd to a frequent Evacuation of a small Quantity, takes off the Eruptions of the Face.* And again, *de Diæta, Lib.* 2. *Purgation draws the Humour from all Parts of the Body, and chiefly from the Head, if it be hot. Now the Evacuation of the Head purges the Eyes, Nostrils,* &c. *and renders the Face cleaner and clearer complexion'd.* So far *Hippocrates.*

The Fevers that commence with great Swoonings,

ings, or a Hiccough, or a Vertigo, are stil'd by Physicians, *Syncopales*, *Singultuosæ*, and *Vertiginosæ*. The Cure of such Fevers must begin with Vomits out of hand; for the Ventricle is the Seat of the febrile Cause; namely, a sharp gnawing Humour, which by twitching the Coats of the Stomach, and propagating its Influence by Sympathy and Consent, annoys the Heart, Diaphragm, or Head; from whence the foregoing Symptoms arise. The Vomit I commonly use in these Cases, is Oil of sweet Almonds, and warm Water. When the Vomiting is over, and the Salts thereby diluted, I presently exhibit testaceous Powders, with dulcifying Med'cines and Emulsions made with Whey or the Decoction of Violets. By this Method I recover 'em happily.

The above-mention'd sharp Humour galling the Coats of the Stomach, is likewise in the fault in such Fevers, or even other Diseases, as begin with a great Anxiety and Restlessness, insomuch that the Patient can't stand still, nor avoid tossing in his Bed. And the only Remedy in such Cases, is a Vomit made of the Infusion of *Crocus Metallorum* in Wine; or of warm Water, with Oxymel of Squills: For the Vomiting is no sooner over, than the Patient is eas'd; especially if he be much troubled with the Heartburn, and other Disorders of the Stomach. Next to Vomits, you may give, by way of Precaution, the Powder of *Cornachini*.

The nearer a Fever approaches to the heighth, the less we insist upon refrigerating Remedies, for fear of opposing the Crisis: But in the beginning, they ought to be liberally prescrib'd; for then the over-bearing Edge, Force, and

Rage of the febrile Heat threaten dismal Symptoms, unless they be mitigated by the prudent Repetition of moistening and diluting Medicines, and the Motion of the Blood reduc'd to that Mediocrity, that's sufficient for making a Depuration.

The mortal Diseases of the Lungs, whether with or without a Fever, are, for the most part, attended towards the latter end with disorders in the Head; namely, Over-sleeping, Lethargy, Giddiness, Dimness of the Eyes, *&c.* I've seen a St. *Anthony*'s Fire in the Face speedily cur'd by the Prescription of a proper Purge; and this was one of the *Arcanums* of a *Padua* Physician, that was my very good Friend.

Costiveness is good for old Men, and a loose Belly benefits the Young. Celsus.

I have made the Observation twice, that those who are troubled with an obstinate Hoarseness, die Hectick within a Year.

The Pains of the Head arise, for the most part, from the Stomach; and if you are satisfied they do, make use of Stomachicks, Clysters, and a regular Diet. I do not speak of the pocky Pains and inveterate *Hemicrania's*, that derive their Origin from another Source.

VII.

The Cautions of Nature, must be obey'd; and tho' we can't fathom 'em, we must still obey; for its progress is regulated not by fortuitous, but by constant and perpetual Laws. This will appear more evidently from the following Instances.

A Woman at *Padua* was wounded with a a Pistol loaded with very small Bullets, about the end of the short Ribs on the left side; the

Whale-

Whale-bone of her Stays being broke with the Force of the Bullets. In the Progress of the Cure, she was seiz'd with a grievous Cough, and cough'd up several Pieces of that Whale-bone, to the great Surprizal of those who were bye. What way Nature brought this about, is a thing unknown. After the Wound was cur'd up, the Woman was taken with an insufferable Pain between her Hips; the Pain was follow'd by a Tumour and an Inflammation, which came to Suppuration: This being open'd with a Lancet, the Surgeon took out from thence the little Bullets that had made the Wound in her side; and so the Woman recover'd perfectly.

A learned Man at *Rome* having took a Clyster of warm Water, kept it intirely in his Intestines; and not long after voided the whole Clyster by Urine, without the passing of one drop by Stool. And this, he told me, he had done frequently. *Benivenius* of *Florence* has much such another Observation in his *Observat. Rarior. Cap.* 7. namely, That a Boy of Twelve years of Age, after a Suppression of Urine for Seven days, voided it by Stool, and recover'd. Anatomists have been long at work, to find out Passages to convey Water directly from the Intestines to the Bladder: But their Labour has hitherto been in vain. *Bonetus*, in his *Medic. Septentr. Tom.* 2. *f.* 652. and the Transactions of *England* for *Octob.* 1670. make mention of these new Ducts or little Canals; but the Truth is not set in a clear Light, and so they are not fully credited. In the mean time, if one should assert, That the Water passes into the Bladder thro' the Pores of the Vessels and Membranes, as the Hydropick Water passes

out

out of the Cavity of the Abdomen into the Inteſtines, by virtue of a Purge; would the Aſſertion be approv'd or diſapprov'd? I leave the learned World to judge of it.

A Man of Forty years of Age ſubject to the Piles, was troubled a long time with a hard and prominent Swelling in the middle of his Breaſt; and having try'd to no purpoſe all ſorts of Remedies, both internal and external, for the ſpace of Nine months, was ſeiz'd on a ſudden with a hæmorrhoidal Flux; upon which the abovemention'd Humour diſappear'd preſently, and almoſt incredibly, and the Patient recover'd. This ſame Perſon is, upon a Suppreſſion of the Piles, oftentimes troubled with a ſort of red Swellings in his Fingers, which yield to no Remedies, but diſappear the next day after the Hæmorrhoids begin to run. Here I could inſert ſeveral Inſtances of the wonderful uſefulneſs of opening the hæmorrhoid Veins (notwithſtanding the Circulation of the Blood) beyond the opening of other Veins; and that in ſuch as are troubled with Pains or Heat in the Hypochondria, a Heavineſs upon the Loins, Wind, Diſtentions, and Rumblings in the Inteſtines, and ſeveral other Diſorders of the natural Viſcera, beſides other of the Vital and Animal. But in regard *Hippocrates, Lib. de Humor. & Epidem. 6.* has ſet down the Benefit of the hæmorrhoidal Flux, I ſhall content my ſelf with inſerting his Words. *Thoſe*, ſays he, *who have the Flux of the Hæmorrhoids, are neither troubled with the Pleuriſie, nor a* Peripneumonia, *nor eating Ulcers, nor Fellons, nor the little Swellings, call'd* Therminthi *from their reſemblance of a Vetch; and, perhaps, not with a Leproſie or Morphew.*

VIII.

VIII.

If Pleuritick Persons do not begin to disburden in the Fourth day, but, on the contrary, the Fever and other Symptoms increase, being accompany'd with a great difficulty of Breathing and Snorting, Death visits them on the Seventh; and in such Cases the Feet use to swell, and the Eyes to grow dim, before Death.

A Scirrhus of the Bladder bears an exact resemblance to a Stone in the Bladder; pursuant to what I have seen twice in the Dissection of dead Corps.

Gross Urine, full of Sediment, whitish, viscid, and sticking to the Chamber-pot, is no inconsiderable Sign of a Stone in the Bladder.

Those who are seiz'd with an inward Aneurisma, or Rupture of the Arteries, die either suddenly, or of a spitting of Blood. I would advise all such Persons to abstain from too much Motion, from Venery, Anger, spirituous Liquors, and whatever inflames or disturbs the Motion of the Blood. Let them use a Milk-diet, moderate Motion, and Food of some Viscidity.

Aneurisma's proceed from a Rupture of the Tunicle of an Artery: Varices arise from the Rupture of a Valve in the Veins; and the *Hydatides* are occasion'd by the broken Valves of the Lymphatick Vessels.

In all the Diseases of the Breast, especially a Spitting of Blood and a Pleurisy, the thinnest Diet must always be prescrib'd; for fear the Blood swelling with too much Chyle, should drive impetuously upon the tender Parts of the affected Lungs.

A hard Pulse is a constant Companion of a Pleurisy, as a soft Pulse is of all the other Diseases

eases of the Lungs: And this you may place among the distinguishing Signs of such Diseases of the Breast as are hard to be known.

In a dangerous and suspected Fever, if a Swelling happens in the parotid Glands, without any great Pain or Suspicion of Inflammation, burn it presently with a hot Iron, to the end that the malignant Matter may be push'd outward, and thrown out by Suppuration. For otherwise the morbifick Cause may retreat to the nobler Viscera, and occasion Death. *Valesius*, among other Authors, recommends this Cure; and I have sometimes seen it perform'd with good Success, by the Direction of a Learned old Physician, in the Hospital of *Padua*. If a Swelling of the parotid Gland appears symptomatically, it always portends Death; as *Riverius* has observ'd more particularly. If it comes critically, 'tis a good Sign. Now a *Parotis* is call'd symptomatick, if it appears at a time when the Symptoms are still high, and the Disease is rather inflam'd than abated.

If in Coughing, little things like Grains are brought up, and these Grains stink extremely when squeez'd with one's Fingers, they are a certain Sign of a latent Vomica or Impostume in the Breast; especially if the other Signs accompany 'em. *Forestus* has observ'd, that in such Cases, upon the breaking of the Vomica or Impostume, for the most part, the Patient dies suddenly.

All the Suppurations of other Parts discover themselves by the accession of a Fever, and a Shivering; only the Suppuration or Vomica of the Lungs, steals on without the foresaid Signs. And this ought to be seriously minded by young Practitioners.

In

In an Impoſthume of the Lungs, Abſceſſes in the Ears and Feet are good, according to *Hippocrates*; for a Vomica uſes to diſcharge it ſelf by theſe two Places, as its two principal Emunctories.

Oftentimes a Quinſey proceeds from a Suppreſſion of the Terms or Hæmorrhoids; which ought to be carefully minded.

If a Quinſey that's truly inflammatory and ſanguineous, as they call it, does not yield to two Bleedings, let ſcarify'd Cupping-Glaſſes be apply'd to the Shoulder-blades, and the Caſe will alter to the better. Of this I have ſeen ſeveral Inſtances.

I cur'd a Woman that was frequently ſubject to the Quinſey, by raiſing a Cautery in her Arm, after a fruitleſs Trial of other Remedies; nay, Cauteries and Scarifications of the Shoulder-blades, are always beneficial in ſuch Diſeaſes as are ſeated about the Neck or Face.

In all occult Quinſeys, If the Patient be ſeiz'd with a Pain in the ſide, the Pain about the Neck and Throat and the difficulty of Breathing and Swallowing being much abated; it ſignifies that the Quinſey is turn'd to a *Peripneumonia*. Now this Change is very pernicious; for either ſpeedy Death or a Suppuration inſues; as the Learned *Dodonæus* has well obſerv'd out of *Hippocrates*.

IX.

In all Diſeaſes, eſpecially thoſe call'd acute; if an Inflation of the Abdomen appears and continues, 'tis the Harbinger of Death. Of this I have had infallible and frequent Proofs in the Hoſpitals up and down *Italy*.

If

If in acute or other mortal Distempers, the Tongue is cold, Death follows soon after. This Observation was communicated to *Riverius* by *Pecquetus*, and I have sometimes observ'd it my self.

In any Disease, if the Appetite be weak and sunk, and comes to be very keen all on a sudden, without any Crisis or diminution of the Disease, the Patient will die soon after: for it signifies, that the Brain is disorder'd, and the sensitive Faculty sunk. This I once prognosticated, upon *Sennertus*'s Authority, in the Case of a Girl that had been long ill; and accordingly she dy'd next day.

If a Patient, extenuated with acute or chronical Diseases, Wounds, or any other way, voids by Stool black Bile or black Blood, as 'twere, he'll die the next day: *Hip. Sect.* 4. *Aph.* 23. Upon the Credit of this Prognostick, I foretold Death four times in our Hospital.

A Leek-colour'd or green Flux of the Belly, denotes either Death or a Disease of long standing; as I have oftentimes observ'd, especially in acute Cases.

In a Fever, if a great Swelling appears in the *Perinæum*, occasioning a Suppression of Urine, or a Constipation of the Belly, 'twill turn to a Gangrene and kill the Patient. *Tulpius* and *Cous. in Epidem.* I have experienc'd the Truth of this Prognostick in two several Instances, to my great surprisal.

In a Fever, if the Patient does not sleep at all, but lies still without the least Complaint, and does not speak, but when a Question is ak'd him; and when his Pulse is felt, draws back his Hand in a trembling Condition and

Hectick,

Hectick, as they call it, he'll certainly die. *River. in Observ.* I've seen many such Patients die in our Hospital. And, for that Reason, when you feel a Pulse, be sure to take notice whether the Hand trembles or not; for if it does, Death is very seldom put off.

In acute and pernicious Fevers, observe at all times whether the Face is much alter'd; if 'tis, there's danger in the Case.

If the sides of the Nostrils are arched and raised, as 'twere, with a flat Nose and a ghastly Countenance, it portends Death; as I have frequently observ'd.

If a Pulse intermits in one Pulsation, it speaks present Death. Upon this Precept of *Galen*'s, I predicted Death three or four times in acute Diseases, in our Hospital.

If in Bleeding for a Pleurisy, the Blood does not get out, either for Pain or Thickness, order the Patient to cough forcibly, and 'twill presently gush out. *Tulpius.*

I do not know that any Author has yet tried, whether the Peruvian or Jesuit's Bark injected in Clysters, communicates its febrifugous Vertue to the Body. For my own part, I try'd it lately at *Rome* in a Boy of Five years of Age, that was ill of a double Tertian Fever, and would take nothing down at the Mouth, which made his Case almost desperate. In the Morning I injected a scouring Clyster, and half an hour after another Clyster, of a dram of the Peruvian Bark with Barley-water; and the last being repeated every day, the third Clyster dispell'd the Fever, and the Boy recover'd beyond all Expectation. This Adventure of mine, may serve to egg on other Practitioners

ctitioners to give further Confirmation of the Matter.

X.

Let Pleuritick Persons, and Women in Child-bed avoid Purgatives by all means.

The chief Diseases of Women in Child-bed, arise from the catching of Cold, the Passions of the Mind, and a plentiful cold Diet.

Sal Prunellæ is a Specifick in ardent Fevers.

A dangerous and copious Super-purgation is stop'd immediately, by exhibiting a dram of *Venice* Treacle in Wine. This I have experienced, upon the Observation of the learned *Dodonæus*.

The two great Remedies for Chronical Diseases arising from Obstructions, are Steel and Rhubarb. In my own Practice, I prescribe thus: Take of sulphurated Steel (or any other sort) fifteen Grains; Rhubarb in Powder, a Scruple: Mix, and drink above it a bitter and diuretick Decoction; not neglecting Exercise in the Morning.

The Chronical Diseases of the Natural Viscera (or those of the *Abdomen*) are cur'd in great measure, by riding out in the Country and frequenting pleasant Places; especially if they depend upon the Passions of the Mind: For Med'cines are sometimes fruitless, and indeed hurtful; particularly, in such Diseases as proceed from a careful and anxious Mind: Of which, more at large in the insuing Chapter.

CHAP.

CHAP. XIV.

Of the Cure of the Diseases of the Mind; and the Method for giving their History.

SECT. I.

ALL Men have their own Cares, and every one lies under a bitter Necessity of spending almost all the Periods of his Life, in attending the doubtful Events of his Labour. Now this being true, 'tis equally a Truth obvious to all Men, that a great part of Diseases either take their Rise from, or are fed by that weight of Care that hangs upon every one's Shoulders; especially among those who live high and plentifully: For such Men are more affected with the Motions of the Mind, than those of the Body; and the Diseases of their Bodies are frequently inflam'd by those of their Minds. Upon this Consideration, I would have all Physicians to be cautious and diligent, in putting Interrogatories to their Patients, with reference to the occasional Cause of their Illness; and particularly to the Passions of the Mind. This Conduct will be more seasonable, than that of running on without any further Enquiry, and promiscuously imputing all Diseases to a Fabulous Fancy of Repletion and Cacochimy. For the Variety of external and occasional Causes, gives a various Turn to the Method of Cure; of which more at large, *Book 2. Chap. 9.* So that the levelling of the Cure of all Diseases at Repletions, is to my Mind a false Method. I own that Repletion gives Rise to many Distempers; but the Passions of the Mind give Being to more; especi-

ally among Masters of Families, or such as are loaded with careful Concerns, or those who sit in Places of Dignity, most of whom have other things to think of, than overcharging their Stomach with Gluttony or Drunkenness.

II.

In order to a fuller Explication of this Matter, there are Three things that require a Solution; namely, whether the Passions of the Mind have an Influence upon the Body; how that Influence is convey'd, and by what means the Diseases arising from thence ought to be cur'd? That the Passions or Commotions of the Mind act upon the Body, is certain, and apparent from daily Experience. *Anno* 1690. in *Dalmatia*, I saw a young Man seiz'd with violent Convulsions, only for looking upon another Person that lay groveling upon the Ground in a Fit of an Epilepsy. The Writings of Authors are full of Accounts of the Power of Imagination upon the Organs of the Body; and to these I refer the Reader. A great many Men, who are otherwise strong and hale, eat their Meat sparingly and timorously, for fear of contracting Crudities, and so falling into Diseases: And, in the mean time, this their vain Fear and sickly Imagination occasions a bad digestion of the little Food they eat, and that throws them into Sickness. On the other haud, the Inconsiderate and Foolish, and others, who are not very solicitous about their Health, will over-eat themselves, and yet digest what they eat, and enjoy a sound State of Health. Of this we have a signal Instance in the rustick and meaner sort

of

of Persons, who have not so great a Struggle with their Affections, and know how to throw off all Sense of Grief and Care, by a certain Negligence in the way of Life. Hypochondriack and melancholy Persons, and those who are naturally timorous and inconstant, are oftner sick than other People, by reason that they cannot moderate aright, or check the Passions of the Mind, as I shall shew at large in the subsequent Part of this Treatise; and tho' the Diseases of such Men may at first view seem pernicious and incurable, yet they are wont to be easily cur'd, not by an overbearing Quantity of Med'cines, but by agreeable Conversation, or the Pleasures of the Country and frequent Riding, or else by a way of living adjusted by a prudent Physician. In the beginning of a Plague, many are seiz'd with it, and die of it, because they contract the Illness rather thro' Fear and Concern for the Publick Calamity, than by Contagion: But in the progress of the Plague, the repeated Observation of what happens, renders Men less fearful and wavering, so that they are not so easily seiz'd; and if they are, they are easier cur'd, pursuant to the Observations of creditable Authors. Women are more subject than Men to Diseases arising from the Passions of the Mind, and more violently affected with them, by Reason of the Timorousness and Weakness of their Sex. This we see, above all, in the Diseases of Young Women in Love. The Green Sickness, the frequentest Distemper they have, is cur'd, after a fruitless Trial of all other Remedies, by Matrimony alone, as the Learned *Panarolus* has well observ'd. From this, and several o-

ther Instances, a natural Inference may be drawn, that some Diseases are really produc'd by the Passions of the Mind, and that the Power of Imagination has a great Influence both in producing and curing them.

III.

Those who sicken upon the Disorder of the Mind, use chiefly to be seiz'd with the Diseases of the Stomach; as, among other Instances, appears from Persons afflicted with Grief, who complain first of a Faintness in their Stomach, and soon after, of an Inappetency, a bitter Taste in the Mouth, and Thirst in the Morning, acid and nidorous Crudities, Wind, Destention of the Hypochondria, and the other Symptoms of a disorderly Chylification. The Chyle being indigested and pall'd, for the foregoing Reasons, gradually infects the Mass of Blood; and the various Disorders of the Blood give Rise to divers Diseases, both acute and chronical; and particularly, to Obstructions of the Viscera, the Scurvy, hypochondriack Illness, *&c.* Students, and those that read hard, complain likewise first of their Stomach; and, by degrees, the Mass of Blood and solid Parts come to be affected. And indeed 'tis no wonder it should happen so; for a great quantity of Spirits being dissipated in both, by virtue of their over-keen and tiresome Thoughts, the Ventricle thus robb'd of Spirits, generates instead of good Chyle, an acid, viscid, and undigested Glue, which breeds blood of the same Nature, that gives Rise to all the dismal Symptoms. Let this therefore stand for a Corollary, That in Diseases arising from the Mind, the chief Regard ought to be had to the Stomach,

mach and the first Concoction; and the oppress'd and almost sunk Spirits ought to be rouz'd up and exhilarated: So that we must not follow the common Course of commencing the Cure of all Diseases without distinction, with Purging, Bleeding, refrigerating, and moistening Med'cines.

IV.

If a Patient is seiz'd with an Illness during a Passion of his Mind, it uses sometimes to last as long as the Passion; and will rather shift to a Disease of another Form, than quit him altogether. I observed this particularly of late in a Woman of Forty years of Age, that was thrown by the deepest Passions of Mind into a great Flux of Blood from the Womb, of which she was cur'd, after using several Remedies for the space of Three months. But the same Concern, and Passions even of greater Violence, continuing for almost a Year, she was no sooner cur'd of that Flux of Blood, than she was seiz'd with a running from the Womb, that was sometimes white, and sometimes particoloured. After this Running was stopt, she was seiz'd with Anguish at Heart, Anxiety of the Breast, extream Weakness, Leanness, Inappetency, Thirst, a lingring slow Fever, a falling off of the Hair, and the like; which continued, and held out for Six months against all the Power of Remedies. To compleat her Misery, she was taken first with the Swelling of her Legs, then with an Ascites, and at last with an Universal Dropsy all over her Body. After all, being worn out with Care, and miserably tortur'd for Five months

with a Legion of Illneſſes, ſhe remov'd to the other World.

Conſidering that the Spirits are mightily diſturb'd by the Diſorder of the Mind, and upon ſuch Occaſions are a'moſt always diſtracted here and there; 'tis no wonder the Vertue of Med'cines ſhould be thereby impair'd, and the beſt Remedies ſhould rather corrupt in the Stomach thus depauperated of Spirits, than give the expected Benefit. For Remedies do no good in a perturbated State of Life; and tho' they are taken in, their Motions are not obey'd. The Diſeaſes therefore ariſing from the Paſſions of the Mind, muſt be gently and ſoftly treated; and we ought to abſtain with the utmoſt Caution from too many, as well as too violent Remedies. Above all we muſt take care of the Spirits, and rouze 'em up if they're oppreſs'd, or pacify 'em if ſharp and irritated. If they are otherwiſe diſorder'd, we muſt exhibit Remedies proper to their reſpective Condition; and eſpecially recommend ſuch Food as gives the beſt Juice, and exhilarating Wines to be drunk ſparingly or plentifully, according to the Patient's Conſtitution.

V.

As for the Mechanick way in which the Paſſions of the Mind produce Diſeaſes, 'twould be requir'd to ſolve Two very difficult Problems; namely, firſt, in what manner, and how far the Humours and Temperament of the Body act upon the Soul, and change its Motions: Secondly how, and how far the Motions of the Mind influence and alter the Body: But conſidering that the moſt tow'ring Genius's of

all

all Ages, have fatigu'd themselves in vain upon this Solution; and that scarce any, besides *Cartes*, have advanc'd any thing upon the Head, that bears a Colour of Reason, it will be allowable in us to skip these knotty Difficulties, that relate but little to the Cure of Diseases. Indeed I take it to be necessary for us, to pursue with diligence what regards the naked and pure History of every Passion, and the Diseases that retain to it; for few of our Profession have hitherto made any Trial that way. We want a History of the Diseases that spring from the Cares of the Mind; to set forth what Diseases spring from any Motion of the Mind, what Smptoms attend 'em, how they increase and decline, how long they continue, and into what sort of Distemper they use to change; what Remedies allay, and what exasperate the Illness; what proper and standing Method of Cure has been yet discover'd for each of 'em, and an infinity of other things. For as Grief produces nothing more frequently than Loosenesses, which grow incurable upon the long continuance of the Cause of Grief, and at last call in an erratick Fever, with a wasting of the Body, which cuts the Thread of Life: So Anger occasions a Looseness, or else a Fever, if it be very violent. Grief and the other Passions of the Mind, are capable directly to produce malignant Fevers, as we see in the Sieges of Towns, in which malignant Fevers rage in that juncture, and are more dangerous than at other times; this being occasion'd, according to the Opinion of the most Learned Physicians, by the Dejectedness of the Besieged. And as Diseases arizing from Care are hard to

be remov'd while the Solicitousness of the Mind continues, or else turn into Diseases of another Form, as I intimated above; so a great many things of this Nature, relating to the History of such Diseases, might easily be found out.

VI.

It remains now to touch upon the Cure of such Diseases; and indeed it must be own'd before we go further, that almost the whole of the Cure lies in the Patient's own Breast; that is, in a Mind well fortify'd with Patience, Fortitude, Prudence, Tranquility, and the other Moral Vertues, without which all manner of Remedies, and all the Efforts of Physicians, will be e'en a'most vain and useless. For the Remedies in the Apothecaries Shops, that go by the Name of Exhilarating, Antimelancholick, Comforters of the Heart and Memory, Whets for the Genius, *&c.* are rather invented to favour the Pomp of the Art, than to dispel the bitter Cares of the Mind, or to rouze a drooping Spirit. I confess indeed that somewhat may be done against the Diseases of the Mind by such Remedies, as are able to change the Mass of the Blood thoroughly, and do not act superficially, but penetrate to all the inmost Recesses, both of the fluid and solid Parts of the Body. Such are frequent Bathing, the Choice of particular Food, or a Diet calculated for the Distemper, seasonable Exercise, Travelling into Foreign Countries, Hunting in pleasant Fields and near the Seaside, continuing long in the Country-Air, and riding frequently, the Use of Musick, Dancing,

and

and the like; all which, by virtue of the soft and gentle Delights they give to the Mind, do gradually repair the sickly Constitution of the Body, and reduce the disorderly Motions of the Imagination to their Primitive Regularity.

VII.

That the Hinge of the Cure of Diseases of the Mind, is fix'd in the Mind it self, will appear from the following Particulars, that Experience has given us to know. 'Tis the Assertion of learned Men, that when Med'cines prove ineffectual, several Diseases are conquer'd at last by Patience, and Tranquility of Mind. And thence it is, that those who are drown'd in Domestick Cares, or affected with Passions of the Mind, if they are taken ill, they'll either find it hard to get through, or will be affected after a severe and unwonted manner, unless they get quite clear of the foregoing Causes, or call up a due Moderation and Tranquility of Mind. This I would have all Physicians to mind, when they visit their Patients; for if their Case is such, Remedies are of no Use; nay, perhaps, they'll do harm, if they be either too violent, or given to a great Quantity. The Women that are not timorous, do not easily mark the Child in their Belly; neither are they too much subject to the Emotions of Imagination. A Man of unshaken Constancy and Firmness of Mind, that enjoys Ttanquility in the midst of Waves, and is not seduc'd either with Hope or Fear; that Man (I say) is seldom seiz'd with Diseases arising from the Mind. And if he is, he will overcome

overcome 'em with the same Felicity that raises him above the Tumults and Turmoils of the World; and that without the Assistance either of Physick or Physician. On the other hand, those who are timorous, soft, tender, nice, peevish, impatient, and Slaves to their Affections; are not only oft'ner sick than other People, but bear a heavier weight of Illness when they are, and create an infinite Trouble to a Physician, upon the Account that they perpetually call up the Sense of their Illness by that assiduous Struggle of interfering Cares; and, by the continual Disturbance of their Spirits, vary and perplex the wonted and regular Periods of the Disease, and the Symptoms. Farther, a great many People severely wounded have been happily cur'd in a short time, because they bore their Wounds with Patience and Intrepidity; while others but slightly wounded, have speedily fall'n a Sacrifice to their own Fear and Despondency. Some thro' Indignation and Impatience, turn the slightest Disorders into long and mortal Diseases: Thus a Cough, contracted by Indignation and a customary Trick of Coughing, degenerates very easily into a Phthisick. On the contrary, others have strenuously surmounted the most weighty and afflicting Diseases; and that by no other means, but undergoing 'em with a Heroick Constancy and Tranquility of Mind, and even bearing 'em patiently, as being the chief Monuments of our Corruption.

VIII.

VIII.

We therefore lay this down for a Certainty, that Diseases arising from Care and Anxiety of Mind, will hardly be alter'd by Med'cines, unless the Mind be restor'd to a State of Tranquility, and gain the Ascendant over the Passions, that so the turbulent and raging Spirits may recover their Primitive Harmony and Repose. So that when a Disease does not yield to proper Remedies seasonably prescrib'd, and proceeds after a strange and unwonted manner, we ought to suspect the occult Passions of the Mind, which a Physician may be inform'd of by the Patient's Friends and Attendants. Sometimes the Suspicion may run upon Venereal Contagion, or Hysterick Cases in Women, or Worms in Children; but of this more in the Second Book, Chap. 9. From what has been said, we may make this Inference by way of Corollary, That those who bear Trouble patiently, use seasonable Exercise, and live soberly, are not readily sick; and if they are, a discreet and prudent Use of Remedies, join'd to their wonted Patience and Tranquility of Mind, will quickly set 'em right. 'Tis likewise an obvious Inference, That the Physician who knows how to manage dexterously, and sway the Motions of his Patient's Mind, will happily extirpate Diseases that are commonly taken for incurable. In the mean time we must take notice that this Method is only to be pursued, when the Patient is *Compos Mentis*, and not affected with grievous, malignant, acute or delirious Diseases. In these Cases, indeed,

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we must insist upon the proper Remedies: But always take Care to proceed gently and calmly; for such Diseases proceeding, for the most part, from the Perturbation of the Spirits and Humours, violent strong Med'cines will add to the Flame.

IX.

Thus we have shewn the Power of the Passions of the Mind, in producing and nourishing Distempers, and the Vertue of Constancy and Tranquility of Mind in surmounting 'em. But in regard such fortifying Ingredients are lodg'd only in the Patient's own Breast, as I have prov'd at large, it remains now to set forth what relates to the Physician. The Physician ought to employ his greatest Sagacity and Industry in raising the depress'd Spirit of his Patient, by any means whatsoever; either by smoothing him with fair Words or humouring him with agreeable Med'cines, and pretending that such Med'cines are the only effectual and Sovereign Means to cure him; or by preaching up the Excellency and sublime Nature of the Humane Mind, which can't endure that its Starry Original should be depress'd by the Usurpation of the Senses, the Authors of a confus'd and tumultuous Life; or at last, if he be immers'd in the Domestick Cares of a Family and Children, or taken up in the Service of his Country, or plagu'd with Dignity, by advising him to retire to the Country, the chief Anodyne and Antidote of Care. In 'tending such Patients, the Physician must take care to deliver his Proposals and Precepts, with that Art and fearless way of Speaking,

ing, that may dispose the Patient to Patience and Tranquility, and influence him to give a great deal of Credit to the Vertue of the Med'cines. I can scarce express what Influence the Physician's Words have upon the Patient's Life, and how much they sway the Fancy; for a Physician that has his Tongue well hung, and is Master of the Art of perswading, fastens, by the mere Force of Words, such a Vertue upon his Remedies, and raises the Faith and Hopes of the Patient to that pitch, that sometimes he masters difficult Diseases with the sillieſt Remedies; which Physicians of greater Learning could not do with nobler Remedies, merely because they talk'd faintly, and with a soft dead Air. Hence it comes, that different Physicians do not find the same Effects of the same Remedies; for one knows admirably well how to screw up his Patient's Faith and Hopes, and another talks so faintly and ineffectually, that he never reaches his Patient's Imagination. All the World knows that Musick is of great Use in the Diseases of the Mind: Upon which Head I can't but take notice of a Passage of *Alexander ab Alexandro Dier. Genial. lib. 6. cap. 5. viz. Asclepiades made use of nothing more than the Musical Harmony and Consort of Voices in curing frentical Persons, and such as were disorder'd in the Mind.*

CHAP.

CHAP. V.

An Exhortation to Physicians to find out and establish a Method of Cure, calculated in particular for their respective Countrymen: With some passing Hints upon the Nature of the Air of Rome, *and the Cure of the Diseases in that City.*

§. 1.

AS the Variety of Climates and Ways of Living, gives Rise to various Temperaments in Men; so this Variety of Temperament diversifies in some measure the Method of Cure; without which Observation, an infinite number of Errors would be committed in the Practice of Physick. Now, this being so obvious a Truth, I cannot but stand amaz'd, that the Physicians of respective Countries have hitherto been so negligent in investigating their Domestick Physick, or the Method of Cure and the Med'cines that are peculiarly calculated for the Constitution of their Country-men; as well as in writing the History of the Diseases they are frequently liable to. 'Tis strange, methinks, they should take their Measures without distinction from some General Rules, and a Method of Cure, that perhaps is proper for those Countries in which the Authors of it live; but 'tis a great Question if 'tis equally proper for all. They compile compleat Histories of the Regions of the new World, and universal Natural Histories; but

but the History of the Climate and Country, to which they owe their Life and their Blood, they neither know nor seek after. We are apt to be taken with Foreign and exotick Things; but what's Domestick, and the Product of our Native Country, is the Object of our Contempt. One and the same Diet, and the same Course of Remedies, will not answer all Countries; for the *Italians* who live soberly, and in a scorch'd Climate, must be manag'd one way; The *French* another; and so on to the *Spaniards*, *English*, *Germans*, and others enjoying a peculiar Constitution of Air and Way of Living. We are inform'd by Eye-witnesses, that the Suture of wounded Tendons, the Operation of the Bubonocele, the Cure of the Ulcers, call'd *Chironia*, *&c.* succeed well in *France*: And, on the other hand, we find that such Operations are extreme dangerous at *Rome*, tho' perform'd by the Hands of the best Surgeons. Semi-tertian Fevers seldom turn malignant in other Countries; and yet at *Rome* they are, for the most part, malignant, or rather very dangerous; which was observ'd in Ancient Times by *Galen*, when he liv'd at *Rome*.

II.

In Ancient Times, the Crisis's of acute Distempers were very regular and perfect; which is chiefly to be imputed to the remarkable Purity and Thinness of the *Grecian* Air and adjacent East; for that being endu'd with a very nimble elastick Spring, the Motions of the vital Humours, with which the Air is intermix'd, must likewise be very ready and quick;

so

so that the Constancy of the Natural Laws impress'd upon 'em, can't be so easily disturb'd by the Opposition of any external Ambient. On the other hand, in an Air that's defil'd with watry and gross Impurities, such as that of the Northern Countries, and those situated near Lakes; the Humours of the Humane Body being likewise tainted with Impurity, and their due Fermentations being, as 'twere, confounded by the foul Influx of the Air, 'tis no wonder, that when these Humours are invaded by morbifick Particles, they can scarce ever reach a due Crisis or Despumation: For, as I said above, the Impurities of the Air impress'd upon 'em, are perpetually thwarting and disturbing their regular Motions. But the Purity of the Air was not the only Cause of the happy Crisis's of the *Græcians*, there being a great deal contributed to that Matter, by the admirable Prudence of the *Græcian* Physicians, who religiously observed the Motions of Nature, looking upon it as the true Directory and Guide for them to follow, in the Cure of any Distemper; nay, they never alter'd their Method of Cure, unless they were advis'd by some new Motions of Nature, what to do, and when, and in what manner to proceed. This was their standing Axiom; That Nature is the Curer of Diseases; and accordingly, they us'd but very few Remedies in acute Cases, least the regular Motion of the Disease, and the due Efforts of Nature, should happen to be disturb'd or oppos'd by improper Remedies. Now acute Diseases being treated thus in the beginning; 'tis no strange thing, that when they came to the height, they went happily

pily off in a regular and a natural Crisis; and that the Physicians should thereupon observe that Crisis's and critical Days are not Chimera's, but certain motions common to every Disease by a Physical Necessity, as being the means by which they compass the due pitch of Solution and Maturation. The *Grecians* finding this Truth confirm'd by Experience, set forth and establish'd the Doctrine of Crisis's, with a great deal of Learning. But now that all things are in disorder in the republick of Physick, this Doctrine of Crisis's is no longer reckon'd an Oracle of instructive Nature, but derided as an idle fiction of the *Grecians*; which occasions so many gross mistakes in the cure of Feavers, of which more hereafter, *Book* II. *of Crisis's.*

III.

To illustrate this matter with an Example; I shall briefly set forth what daily experience gives us to know concerning the temperament of our Air, and our method of cure, in the City of *Rome*. The Air of *Rome*, being now hemm'd in with seven Hills, is naturally moist and heavy; for we are taught by Experience, that when one walks to some distance out from among the Houses, he manifestly perceives a sort of heaviness and uncouthness of the Air. It abounds chiefly with vitriolick and aluminous Salts, as it appears from the Plants that grow in it, the Vitriol and Alum Mines of the Country, and the Waters that wash the Roman Soil. 'Tis much infested with unwholsome Winds that blow from the

South, South-West, and South-East. Sometimes 'tis so prodigious hot in Summer, that 'tis no wonder the dryness of the Soil and excessive heat of the Sun occasion'd a Plague in the Consulship of *L. Val. Potitus* and *M. Manlius*, as *Livy* informs us, *Lib.* 5. From these, and other Reasons to be mentioned hereafter, the Inhabitants of this City are of a melancholy Temperament, a browniſh (and some a paliſh) Colour, and a habit of Body that's rather lean than fat. They are very liable to Disorders in the Head, and particularly to those Diseases which a heavy Air uses to produce, such as disorders in the Lungs, malignant Fevers, Cachexies, paleness of Countenance, Night-Mare, Consumption, and the like. Further: The *Roman* Air is likewise foul and unwholsome, not in all places indeed, but those chiefly where Houses are wanting, and the Air is slow and unmov'd; and above all, in such places as lie upon the *Tiberis*, or like Vallies are hedg'd in by Mountains, or are expos'd to the exhalations that rise from old ruinous Walls, Vaults, and the Rubbish of the ancient Edifices. From whence it is manifest, that the quarter of the *Circus Maximus* lying between the Palatine and Aventine Hills, and all that large Field that lies between the Aventine, the *Tiberis*, and the Ostian Gate, is downright unhealthful and pernicious. But to adjust the matter all at once, all places surrounded with a frequency of Houses, standing high, with a prospect to the North or East, and a considerable distance from the Tiber, are healthful. On the contrary, places remote from many Houses, situ-

ated

ated low, and in Vallies near to the *Tiberis*, and pointing to the South or West, are reckon'd less healthful; and in these very places, which indeed is very wonderful, one part of the Air is reckon'd in some measure healthful, and another at a very small distance is deem'd very pernicious.

IV.

This unwholesomeness of the City Air is foster'd in a great measure by the adjacent *Latium* or *Campania di Roma*, which is surrounded with a ridge of Mountains every way, excepting that tract which runs out towards the Mediterranean, where it ends in a plain. For the ancient *Latium* is now in a manner a Desart, and over-run with impurities; 'tis openly expos'd to the South-Wind, and in several parts of it, particularly about *Ostia* and *Porto*, the Air is observ'd to be very unhealthy, especially in the Summer time, insomuch that if any Citizen goes out and stays all Night in any of these places, and then returns to Town, he is presently seiz'd with a malignant Fever, commonly call'd the Fever from the change of the Air; which is a peculiar sort of Fever, and very different both in its Symptoms and Method of Cure, from other Fevers that spring from other causes; for it being accompany'd with the signs of Coagulation, we find that blistering Plaisters and alexipharmacal Med'cines are very beneficial in it, and Bleeding, on the other hand, is extream pernicious. The aliment that the *Roman* Soil affords, gives but very little nourishment; so that it not on-

ly produces a great quantity of Excrements in the first Passages, but palls the very Mass of Blood, and renders it unfit for motion. From this Constitution of the Air and Humours, it comes to pass, that the Inhabitants of the City have no voracious Appetite; and even Forreigners, who in their own Country use to eat and drink liberally without indangering their Health, find, when they come to *Rome*, that the keenness of their Appetite goes off by degrees, and that they lie under a necessity of laying aside their wonted intemperance, and taking up with the customary sobriety of the Town, unless they mean to run the risque of incurable Evils. If the Inhabitants of the City dine heartily, they must eat a very slender Supper, not above seven Ounce weight, and carefully abstain from all Meat at Night; for without that caution they bring upon themselves remediless Crudities, and perverse collections of Humours. Among other things they ought to ply Exercise, especially in the Morning and at Night, those being the Seasons in which the concoction of the aliment is over, and the separation of the pure and impure Parts is almost compleated; for experience teaches us, that if they eat a hearty Dinner, and do not exercise their Body at Night, they are liable to a heaviness of the Head, weariness of the Limbs, uneasiness about the Hypochondria, Crudities, unwonted Sadness, and the like. In fine, since the Air by reason of its innate gravity, contributes but little to the volatilization of the Humours; those who would eat heartily without prejudice to their Health, must either follow a great deal of Exercise,

ercise, or take care to have two or three Stools a day; for we find by experience, that those enjoy the best measure of Health, who are both temperate, and go readily to Stool every day.

V.

So far for the preservation of Health: We come now to give a short account of what is particularly observ'd with reference to the use of Remedies and method of Cure in this City. The Inhabitants of *Rome* can't bear spirituous and very active Med'cines, such as volatile Salts, Spirits, and in general whatever is too aromatick or sharp. The use of such Med'cines occasions not only a painful heaviness of the Head, with great disorders upon the Nerves, but likewise a Destention and burning heat in the Viscera of the Abdomen, Costiveness, *&c.* Nevertheless, if such Remedies are call'd for by the Nature of any Distemper, we use to avoid the foregoing inconveniencies, by qualifying them with diluting and unctuous Ingredients, and such as check their too forward activity; for when thus qualified they do very good service. In a word, all spirituous Remedies, that are likewise indued with an unctuosity, that is your *Spirituoso-oleosa*, are the chief Remedies we use. In this City violent Emeticks are very much suspected, by reason of the grievous Symptoms they occasion; and the same censure is pass'd upon strong Purgatives. Purgatives given in the form of Pills, have no successful or plentiful Operation; but if they be given in a liquid Form and a moderate Dose, they do a great

deal of service. They cannot operate happily (especially if they are given in Pills or Bolus) unless you exhibit, when they begin to operate, five or six Pints of thin Broth, or some Water that passes easily; for diluting ingredients joyn'd to Catharticks, not only forward the purgation, but prevent all the Symptoms, that Purgatives given by themselves use to produce, namely Thirst, Uneasiness and distention in the Hypochondria, squeamishness, subsequent Watchings, inward Heats, *&c.* This use of diluting things, is reckon'd necessary in the Prescription, not only of Purgatives, but of all other Remedies in a dry form, and of a spirituous Nature; in order to prevent the Disorders of the Head and Nerves that frequently insue thereupon. 'Tis likewise a general observation, that in the cure of Diseases, especially such as are acute and come with great force and acrimony, diluting, emplastick and glutinous Med'cines are much the best; such as Gelly of *Harts-horn*, Oil of *Sweet Almonds* new drawn, emulsions of the Seeds and of *Almonds*, Syrup of *Violets*, the Cream and other preparations of *Barley*, a Milk Diet, Bathing, *&c.* as also Spirituous Remedies, when temper'd with oily and diluting Correctives: And on the other hand, that volatile sharp Spirituous and Aromatick Med'cines, or such as are very active, and over dissolving, are generally hurtful, tho' given in a smal quantity.

VI.

But to wind up the Matter in a narrow compass; there's no sort of Remedies that affords

fords so much benefit to our Citizens, as Exercise and a prudent repetition of gentle Purgatives. 'Twas with this view that the Learned *Petronius* invented a purging Electuary call'd after him *Alexandrinum*, with which he did wonders in curing the Diseases of the *Romans*; and that same Author gave us, about a Century of Years ago, a noble piece *de victu Romanorum*, in which he carefully remarks the various advantages and disadvantages of the Air, Water and Aliment of this Climat; and then proposes several other very material things, relating to the method of Cure and the use of Remedies in the Diseases of the *Romans*. He asserts, from long Experience, that the Cititizens of *Rome* are troubled a'most always with three principal Disorders, namely, a constant heavineſs of the Head, which he calls, *Capiplenium*, costiveneſs and a wearineſs of the Limbs: From all which we make a manifest inference of the gravity and grossneſs of the Air, and the lazineſs of the pall'd Humors occasion'd by too great an accession of vitriolick and aluminous Parts. In curing Wounds and Ulcers at *Rome*, avoid all Ointments, for they frequently do harm; whereas good succeſs attends Balsamick Medicines, vulnerary Decoctions, vulnerary Spirits, and others of that Nature, which facilitate the Cicatrization, by corroborating the injur'd Part, and restoring the lost spring of the Fibres. Here Ulcers in the Feet are almost incurable; and even Wounds in the Feet are hard to be cur'd, especially if unguentaceous things are apply'd to 'em: But Wounds or Ulcers in the Head are easily cur'd. From these few Ob-

ſervations made in the Climate of *Rome*, Phyſicians will eaſily perceive what courſe they ought to take in finding out and eſtabliſhing a method of Cure, calculated in a particular manner for the Natures of their reſpective Countries.

VII.

I take it to be needleſs to inſiſt further upon the neceſſity of a domeſtick medicinal Hiſtory; for the thing ſpeaks its own proof. And undoubtedly a great many errors committed every day with reference to the manner of Diet, and the juſt quantity and uſe of Remedies, proceed only from the want of that Hiſtory; notwithſtanding the ſlender pretences of others, who impute the cauſes of theſe Errors to remote Principles, or ſuch as hold no analogy with the produc'd Diſeaſes. Experience itſelf vouches for the power of Climates, in cauſing Diſeaſes and changing the Conſtitutions of Men: For generally ſpeaking, the Natives of ſome Countries are frequently liable to ſuch Diſeaſes as are ſeldom or never known in other Countries. Accordingly we ſee the Scurvy reigns in the North, and the Diſeaſe call'd *Plica* in *Poland*; the *Engliſh* are ſubject to the Rickets, and the *Engliſh* ſweating Diſeaſe; the *Egyptians* and *Syrians* to the *Elephantiaſis*, and the *Romans* in the time of *Pliny*, to that wild Tetter call'd *Mentagra*; upon the *Alps* the Inhabitants are ſubject to a *Bronchocele* or Swelling under the Throat, as the *Spaniards* are to ſcrophulous Tumours in the Glandules of the Neck. On the other hand, ſome Nations are ſeldom or never

viſited

visited with some Distempers. A Quartan Fever is a rarity in *Scotland*, and so is the Falling Sickness in *Hungary*; witness *Donius*, Fol. 7. *de rest. salub. Urb.* Which questionless proceeds from the specifick complexions of such Climates. Further, some Nations bear certain Remedies, that perhaps kill the Inhabitants of other Countries. Your *German* Physicians make great use of Emetick Remedies, and cry 'em up in all Diseases; perhaps, because they find 'em successful in their Country where the Winter lasts almost all the Year round, and the Natives are too liberal in gratifying their Appetite. For the same reason the *Germans* bear with ease the most active Chymical Med'cines, high Living, *&c.* which being tried at *Rome*, pursuant to the prescriptions of the *Germans*, has prov'd pernicious; nay, not only the *Germans*, but the Physicians of other Countries boast of some general Remedies and method of Diet, that gives great relief to their Patients: Thus the *Spaniards* cry up Bleeding, the *English* glory in Opiats, the *Dutch* are always upon their Diaphoretick Med'cines, and so of the rest. And certainly they would not recommend the use of such Remedies so earnestly, if they did not find them successful in curing the Diseases of their Country. But if they are us'd promiscuously upon all Constitutions, without examining the Nature and Qualities of respective Climates, as well as other Circumstances to be mention'd lower, 'tis no wonder that they produce very different Effects in the cure of Diseases. Perhaps it may come to pass from this diversity of Climates, and of ways of Living, that the

Apho-

Aphorisms and solid Precepts of *Hippocrates* are not always verify'd, but prove doubtful and inconstant upon the Experiment. And the same judgment ought to be made of the Precepts and Cautions of other Authors, if they should happen not to hold among our Patients: Not to mention the various and opposite Methods of cure follow'd by Physicians, which frequently break the constancy of such Precepts.

VIII.

Since therefore, the Air, the Course of Life, and the various Nature of Food, in divers Countries, are almost entirely the causes of Diseases; 'tis incumbent upon every Physician, in those respective Countries, to disclose, by the means of repeated and aged Observation, a Method of cure particularly proper for their Country-men, and such Topicks of Remedies as are either familiar or pernicious to them: And when they read forreign Authors, not to practise their Method, before they weigh it nicely in the Ballance with their own, and find it suitable to their own Observations. Further, I would likewise advise all Physicians, when employed in the cure of Diseases, to examine with diligence and maturity, the divers Seasons and Constitutions of the Weather, and the general Diseases that reign under such influences of the Air; for, 'tis apparent from the Observation of Learned Men, that every particular Disease owes something to the general influence of the Air, and calculates its periods and manner of invading and affecting accordingly. In fine, as the influence of such

such Seasons is various, so the Diseases that rage for the time, require a various Method of cure, according to the Doctrine of repeated Observations.

IX.

The chief Heads, upon which this History of every Country should run, are, the Air, the Nature of Waters, and the Situation of Places; that is, it ought to take notice of the Rivers, Lakes and Springs; of the Hills, Plains, and Mountains; of the situation of the place towards the East, or West, or the other points of the Heavens; of the Animals that are chiefly bred in the Country; of the Minerals, and other products of the Earth. It ought to give a particular account of the Customs and the Constitutions of the Inhabitants; of the Diseases that are most common among them, and the Method of cure that sets them free; of their Domestick Remedies, or such as grow in their native Soil; of the various and most remarkable influence of the Seasons, and a thousand other things, by which the Seeds of Diseases are nourished or stifled. The Inhabitants of cold and moist places are lubber Headed, fat and thich Lipp'd, and their Cheeks are protuberant. Some Countries produce very short Men, some tall Men, and some again produce Inhabitants with swellings in their Throats. Some dispose their Inhabitants to a phthisick and raging Cough, as 'tis commonly observ'd in *Great Britain*; some to the Plague and other Diseases. Besides, this diversity of Countries makes no small difference in the Temper and Manners

Manners of the Inhabitants, with reference to Timorousness and Courage, Pleasure and Pain, and the other Dispositions of the Mind, so that the Dispositions of the Mind would sometimes seem to assume the quality of corporeal Motion. Unless the Physicians of particular Countries take care to furnish themselves with all these Ingredients, they'll scarce be able to compass a perfect Cure for the Diseases of the Natives; with which view *Celsus* tells us, *In præfat lib. de Medi.* that the course of Physick alters according to the Nature of Places; that *Rome* requires one sort of Practice, *Egypt* another, *France* a third, and so on.

The End of the First Book.

THE

THE PRACTICE OF PHYSICK.

BOOK II.

CHAP. I.

By way of INTRODUCTION.

§. I.

THE Design of this Performance, is to shew clearly the importance of Observation in the way of Physick; and having for that end touch'd upon some general Causes, that have retarded the progress of our Art (the remaining part of 'em will fall properly under the next Chapter) I now reckon it necessary to declare in this Book my Opinion of the increase of Practice obtain'd by the means of History. If this my Opinion is agreeable to the measures of Truth, I am proud of doing Mankind a piece of Service; if not, I shall

shall willingly stand corrected, and earnestly desire that others would do for the good of Mankind, what I was not able to perform. Now, considering that a great many things concur to the forming of a System of any Disease, namely, the Causes, Signs, Phænomenon's, Indications, Remedies, *&c.* we shall speak of all these in order, beginning with the History of the Phænomena, in which the Nature of Diseases is really situated. To proceed more clearly in the matter, I reckon it necessary to divide Physick into the first and second Species. By the first I understand a pure History of Diseases, obtain'd by sole Observation at the sick Man's Bed, and related by the Patients themselves. In order to compass this History, there's no occasion for other Sciences, or the reading of Books; for in regard it makes a Science, or Fund of Knowledge by itself, and depends upon Observation, and the Narratives of sick people, whatever accession it receives from without must needs confound it and render it uncertain; and from thence sprung the Errors I have so often hinted at. Upon this Head a Physician ought to act the part of a Witness, that barely relates without passing any Judgment, and to set down distinctly the minutest Circumstances: For some of 'em are no sooner perceiv'd than they point to the right method of Cure; and others afford such light as facilitates an Enquiry into the Nature of more difficult things; so that Observations may justly be divided into the *Luciferæ* which affords an useful Light, and the *Fructiferæ*, which are attended with a real and immediate Fruit. In compiling therefore this

History

History of Diseases, we must not fly off from the coherence of things, and give our Minds a loose at every turn as the Poets do; but submit our Wit to the real ap pearance of things, conquer Nature by Obedience, and learn the peculiar Language in which it speaks. By the *Medicina Secunda*, or that part of Physick which I call the Second, I understand all that falls within the verge of Physick, over and above the first now explain'd. This indeed is improv'd by other Sciences, and requires the utmost stretch of Knowledge, Method and Reason. Some may object against our Project of a certain and standing History of Diseases; that some Diseases are the irregular Efforts of forlorn Nature, indeavouring to throw off the peccant Matter without any certain Order or Rule. But considering that an animated Body is a complexion of animal, vital and natural Actions, laid concordantly together, and depending upon certain Principles subject to the Laws of Nature, that God has ordain'd; when these Principles come through violence or error to depart from their Natural State, what motions they put forth to retrieve their primitive State, will be such as are regulated by Nature. This is made out by Experience, not to mention other Topicks; for we see that all Natural things, particularly, Plants, Juices, Fruits, *&c.* have set times of flourishing, ripening, depurating, and putrifying; we see likewise that all Diseases, especially those of an acute Form, have a certain standard of increase and declension, and that a Physician cannot change this course and stated Period of Diseases, by the exhibiting of

Med'cines,

Med'cines, without inflaming the Diſeaſe, or turning it into another that's yet more dangerous. Add to all this, that we find the Obſervations of our Anceſtors, particularly of *Hippocrates*, are ſtill agreeable to Truth, which could not be without a fix'd courſe and progreſs of Diſeaſes. So that whoever is againſt this Doctrine, and cries out that Phyſick is an Impoſture, muſt needs be an Impoſtor and a Cheat himſelf.

For a further illuſtration of this Hiſtory, it will be worth our while to keep to the ancient diviſion of Diſeaſes into Acute and Chronical. The Ancients call'd theſe Diſeaſes acute, which are ſeated chiefly in the Fluids, and depending upon their boundleſs ebullition run ſpeedily thro' their Period, and unleſs they are prudently manag'd terminate either in Death, or in tedious incurable Diſeaſes. By Chronical Diſeaſes they meant ſuch as proceed frequently from a diſorder in the ſolid Parts, or from a vitious indigeſtedneſs and groſſneſs of the Fluids, ſo that they either move very ſlowly towards a Concoction, or elſe never reach it. Now the Nature of Remedies muſt be diverſify'd according to the various State of the Blood in theſe Diſeaſes. We ought not to ply every Patient promiſcuouſly, either with ſpirirituous or with watery Remedies, as many are wont to do. In acute Diſtempers, a great part of the Cure depends upon the Phyſician's patient waiting and acting with Judgment and Sagacity; and tho' ſuch Diſeaſes come frequently to a ſpontaneous Solution, either by chance or through the favour of Nature, yet Phyſicians are not guilty of greater Errors in

any

any part of their Profession, than in the cure of acute Cases. On the other hand, in Chronical Diseases, retaining to the faint and decay'd Nature of the Solids and Fluids, the whole of the Cure depends upon the skill of the Physician, and the energy of Remedies; for neither Fortune nor Nature do much in such cases.

But now, if any Gentleman of a nicer Taste should be disoblig'd by the mentioning of *Nature* so often in this Book, and brand it for a refuge of Ignorance, I would have him to know, that by *Nature* I do not understand some wise Phantome, roaming about every where, and directing all things by its Counsel; but a certain general complex of natural Causes, which, tho' destitute of Counsel or Design, put forth their Effects in pursuance of the Laws appointed by the Creator of the Universe; and that in such order, as if they were govern'd and directed by the best concerted Counsels. I understand, if you will, the Æther from which all Motion springs, or a complex of essential Accidents, namely, Motion, Figure, Magnitude, Situation, and the Rest, upon which all corporeal Actions depend under the direction of the Soul: This, I say, is that Nature I have so often recourse to in this Treatise.

CHAP. II.

Setting forth some of the principal Causes that have hitherto retarded the History of Diseases, or the Medicina Prima.

§ I.

I Intimated in the foregoing Chapter, that under the Title of *Medicina Prima*, I understood nothing else, but a most exact Description of the phænomena of every Disease, which make up their due and natural History. But before I enter upon the Rules for compleating this History, 'twill not be improper to inquire by the Bye how it comes to pass, that Physicians have hitherto made little or no progress in that part; notwithstanding the large Volums of Observations that are extant. In the first place they were took off from a due pursuit of Experience by that late Opinion of the fallacy of the Senses, which insinuated, that an inquisition into particular things is infinite and endless. But the falsity of this Opinion is apparent when we consider, that all the improvement of good Arts in this our Age, is owing only to the Senses and to Experience. Nay, which is much more wonderful, how many things do we owe to Chance? We all know that the greatest part of Remedies, and several other things in the Physical way came to light by that means. And as for the other Inventions, the enumeration of 'em would be too tedious. Did not Chance bring to light the force

force of Gun-powder, the Conversion of the Load-stone to the Poles, and the use of Telescopes? Now if Chance can do such mighty Feats, why should we be so scanty to the Senses that proceed in an orderly and regular method, and tho' they sometimes err, yet see and correct their own Errors? Another thing that stood in the way of Experience, was, the ancient Hatred of the rational Sect against the Empirick, which they look'd upon as abject Mountebankry, unworthy of a Man of Letters; and indeed in so doing they had not done amiss, had they meant by *Empirick*, a stupid, erratick, unrepeated way of Experience, not fermented in the Intellect, and consequently producing nothing but erroneous Conceptions, and monstrous Opinions. But they carried the matter too far in impeaching the *Empirick* Rational Sect, or the Empirick Sect become Literate, invented by Method not Chance, improved and directed by the Understanding, and rais'd to the pitch of Truth after a long Inquisition into the Effects of Diseases; which was always approved of by Men of Learning, as being consonant to Nature. In the Third place, we have made but little progress in this sort of History, for want of a Guide either to direct us by his Example, or to light us into the method of Experience through so many difficult and uncertain Passages, and so many differences of Diseases. And tho' *Hippocrates* was the first that smell'd out this matter, and publish'd it in his Writings, either Physicians have not observ'd it, or have put an unfavourable gloss upon it, through their Prepossession and false Idols. 'Tis true, the rational

Physicians consult Experience sometimes, but they only draw from it some general Heads, and those neither fully detected, nor maturely examin'd, and the rest they lay upon the Anvil of Thought, in order to work 'em into a consonacny with their own Reason. The Empiricks again, tho' they always glory in Experience, never come to the right use of it; for besides that they set about it without light or method, they can't bear that tediousness of Inquisition, that's requisite in tracing the effects of Diseases, and deducing practical Precepts from thence. 'Tis no wonder therefore that this stupid, cloudy, and erroneous way of experimenting, has given rise to that monstrous practice of the Empiricks. Some contented with a few Experiments, and those of a narrow obscure extent, raise thereupon a new Philosophy, and a new Theory of Physick; and if they meet with any thing that is not exactly consonant to their advances, they have a strange way of wresting it and bringing it about to their purpose. Such is the Philosophy of the Chymists, built upon a few Experiments taken from the Furnace, *Gilbertus*'s Philosophy of Magnetism, *Mayow*'s System of the *Aereous Nitre*; and in fine, an infinite number of practical Systems founded upon the Doctrine of *Alcali*'s and *Acids*, the Triumvirat of the Humors in the first Passages, *&c.*

II.

Many affect the noise of Experience, but conclude upon their own Notions before they consult it, and then tye it up strangely to these Notions and wind it about to serve their turn. And according as the *Area* of their fancy is clean, or possess'd by prejudice, so they judge variously of their own and others Experiments, and either darken or enervat 'em with their own Meditations. Some giving their Mind to Astrology, Magick, and other superstitious whims, that lie almost beyond our reach, have confounded the true phænomena of Diseases with superstitious Traditions. Now, from all these there arose a threefold Offspring of Errors, or three false Systems of Physick, namely, the Sophistical, the Empirick, and the Superstitious.

Further; tho' Authors have amass'd together great and bulky Volums of Observations, yet the first History of every Disease has been but little improv'd. For 1. they observ'd no Method or Order in making their Observations, but acted like Men in the Dark, that grope at every thing till by chance they light on the right way; or like Men in a Desart, that take Counsel from a fortuitous appearance of things; they drew their Observations in an interrupted and prepostrous way; so that 'tis no wonder they borrow'd from thence, and imparted to us an uncertain Twilight rather than a constant and clear Light into the effects of Diseases. 2. These Observations are like so many unsteady Waves of

fleeting Experience, made upon three or four Cases, and not continued in a constant order through hundreds and thousands of Patients, as the School of *Coos* did. 3. Tho' many of 'em have Observations, yet they are so confus'd and perplex'd with the forms of Theory, that the cleareſt sighted Physicians can't distinguish, whether 'tis Nature or the Author that speaks. 4. The Practice that some follow'd was more Speculative and Hypothetick, than calculated to Nature's method. From whence 'tis credible, that Diseases went thro' their Periods, not by their natural and constant Laws, but according as they were variously treated in divers courses of Practice; that is, the Progress, Exit and Symptoms of such Diseases were more owing to the respective methods of Practice, than to the immutable and individual Nature of the Distemper. Thus, such as begin the cure of the Pleurisy with Purgatives or violent Diaphoreticks (an unsafe and unlucky method) ought to impute whatever Symptoms appear afterwards, rather to these Remedies, than to the genuine Nature of the Disease. We conclude therefore, that all Observations made upon Diseases irregularly cur'd, are of no use for promoting their Natural History; for that they set forth the Case otherwise than it is in itself or ought to be. 5. The prepossession of the Mind has likewise occasion'd the omission of many Symptoms that did not exactly suit with the Author's Hypothesis, and the arbitrary fiction of a great many, as being necessary for their further Confirmation. So that a pure and exact History of Diseases, I mean such as flows

from

from the very Nature of things and is describ'd by the Patients themselves, is not to be met with in Books; upon the account that the Discriptions of Diseases are for the most part taken not from Observation and matter of Fact, but from the Author's Brains; and that many Symptoms are ascrib'd to 'em, through the licentiousness of Opinions, or the negligence of Practitioners, that do not at all belong to 'em, as it appears from daily Experience: Nay, for a proof, we need go no further than the Hypochondriack Illness alone, of which the Galenists have forged so many monstrous things, to save and maintain their Hypothesis of a hot Liver and a cold Stomach.

III.

Those who reason of the History of Diseases, according to the Rules and Laws of such other Sciences as they take delight in, will never illustrate the Nature of Diseases by Observations; as I shew'd in the first Chapter of this Book. The famous Lord *Verulam*, among many others, laments extreamly the injury done to Natural History in general, and the increase of it, by *Plato*'s inserting his Theology in the course of his Philosophy. or judging of Philosophical Matters by abstracted and theological Notions. And such indeed is the case of Physick; for in the last Age Logick was so much in vogue, that Physicians apply'd its stern and severe Rules to the History and Cure of Diseases; and how far they were out in so doing is plain

from this, That after all the mighty pains and labour spent upon Physical Matters, they brought to light, not new discoveries or hints pointing to 'em, but Questions out of Questions, and Fallacy out of Quibbles; and so put Physick intirely into the Hands of the Sophists. But as for Dialectick or Logick, tho' 'tis usefully apply'd to such Arts and civil Affairs as are grounded upon Opinion, yet it hardly reaches the refin'dness and subtility of Nature, and in Natural History serves rather to confirm than to pull up Errors. Upon this Consideration, *Gregorius Nyssenus* breaks out to this purpose. *All the World sees that the Dialectick Quirks are equally strong on either side, either for overturning Truth or refuting Errour; by which means it comes to pass, that the Truth itself, when set forth by that art, is generally suspected, as being tainted with that subtilty that blinds our Eyes, and misleads us from the Truth.*

Tho' many Physical Authors have, for the above-mention'd Reasons, contributed but little to the Illustration and Improvement of the History of Diseases; yet in all Ages, and particularly in the two last, there have been some, who being either Men of excellent Sense and Judgment, or bred under good Masters, or acquainted with the Truth by reading *Hippocrates*'s Writings, have made Observations to very good purpose, and illustrated both the above-mention'd History and Practice itself, with practical Precepts confirm'd by long Experience. Such are *Duretus*, *Hollerius*, and *Jacotius*, *Ballonius*, *Tozzius*, *Martianus*, *Sydenham*, *Septalius*, *Morton*, *Mangetus*, *Valescus de Taranta*, *Tulpius*

Tulpius, *Nicolaus Chesnau*, *Franciscus Rubeus* of *Genoua*, *Riverius Moreus*, (an *Italian* Author of *Fevers*) *Iodocus Lomius*, *Valschmid*, and others of the like Form; whom I recommend as true Practitioners to be imitated by young beginners

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CHAP.

CHAP. III.

Containing Rules for contriving and promoting the History of Diseases, and deducing from thence Practical Aphorisms.

§. 1.

THE Physical School that flourish'd at *Coos*, was ever in great Reputation among all sorts of Physicians: And indeed very justly. For whether you regard the Importance and Method of the Subject they treat of, or the number of Inventions and Discoveries, you must own, that upon these Heads they went beyond all other Schools. That School brought up, among other great Men, *Hippocrates*, descended of the Family of the *Asclepiades*, being the 20th from *Jupiter*, the 18th from *Æsculapius*, and the 9th from King *Chrysamis*. This great Man following the method of that School, was much given to Observation, diligent in delineating with fidelity and exactness the History of Diseases, and wise to a wonderful degree in fixing practical Precepts, confirm'd by long use. And I am of the Opinion that he kept so close to that Preceptive Aphoristical and grave method in his Writings, for no other end, but to insinuate tacitly to us, that 'tis the most proper method both for improving and confirming Physick. But considering that the Primitive Fathers

Fathers of Physick have not plainly communicated to us the necessary Rules and Cautions for fixing such Precepts, nor left us that wide Field of Observations from whence they were took; methinks they have done by us as the Architects use to do in raising Obelisks, or building great Edifices; for when they are about them they have their Ladders, Scaffolds, Ropes, and many other Instruments of Architecture; but when the Work is finish'd they remove all these; from whence it comes to pass, that tho' Posterity admires the magnificence of the Edifice, yet they are ignorant of the Instruments made use of in building it. In like manner young Physicians admire and read with veneration the Works of the divine *Hippocrates*, but stand amaz'd and are cover'd with ignorance when they consider what Instruments he imploy'd in building so noble an Edifice. Now these Instruments I purpose to set forth (as well as I can) in the ensuing Chapters, by pointing to such means, as perhaps were made use of by *Hippocrates*, in promoting and perfecting Physick by Observations, History and Precepts.

II.

In compiling the History of any Disease, four things are chiefly necessary; First, an Acquisition of particular Observations. Secondly, the due Disposition of them. Thirdly, the Maturation and Digestion of these Observations. And, Fourthly, the deduction of Precepts and general Axioms out of the Observations thus prepar'd. Of each of

these

these apart. The infinite Inquisition and Description of particulars, is the first Basis of the History of any Disease; so that a Historiographer of this Nature ought to fall first about this, and to spend many Years in acquiring a large number of Observations. In going about this Work, he must not trouble his Head with gratifying his Readers Palate in fine Words, nor confine himself to what is useful to Patients; but only heap together such a quantity of Particulars, as is sufficient for a deduction of Axioms, and fixing a clear and perfect natural Idea of the System of the Disease he treats of. Let his Observations be set down in a rough and unpolish'd Style, that is, in the same sort of words that Patients use when they express their ails: Let him set down the minutest, meanest and most useless Circumstances: Let him add nothing of his own, I mean nothing that either a nimble way of disputing, or an empty shew of Learning may suggest; but like a faithful Scribe, he must diligently collect the Laws enacted by Nature, and describe 'em in the same very manner in which Nature spoke 'em. He must regulate his Conduct, as Judges do in Civil Causes, upon which the best Sentences and Judgments are pass'd, when, without regard to the Licentiousness or eloquence of Oratours, all the stress is laid upon the Witnesses: For in like manner, the Judgments pass'd upon the Nature of Diseases, will then be best, when they are taken from the evident joint-Testimonies of Experience, not alter'd by the licentiousness of Authors, who are sway'd by Humour and Prejudice; whereas the real Testi-

monies

monies and responses of things, are, tho' sometimes obscure and perplex'd, yet always sincere and uncorrupted.

This rough and unpolish'd way of Observations, join'd to the long attendance that the acquisition and taking of 'em requires, may perhaps scare both the Reader and the Writer, and seem equally troublesome and useless to both. But be it known to 'em, that a Collection of such Observations, is like a Barn or Store-house, in which we are not to stay with pleasure, but to step down to it now and then, when we want any thing, either for the construction of Axioms, or the cure of Diseases. Nor has any thing sunk the verity and fidelity of the Medcinal Natural History more than that fatal itch of Authors to imbellish it with new and quaint ways of Speaking, subtile Speculations, copious Quotations out of Authors, and such other things as are added to gratifie the Reader. It is expedient therefore to manage the History and Narrative of Cases, as if Physick were but just now come into the World; for that History of Diseases, that shines as it were through a Cloud in the modern Books, wants that expurgation, that Sir *Francis Bacon* of old adjudg'd for Philosophy. *I am not Ignorant*, says he, *that there is extant a natural Hiostry, the variety and diligence of which renders it both grateful and curious; but if you cull out of it the Fables, Antiquity, Quotations of Authors, idle Controversies, Superstition, Philology, and other ornamental Appendages, which are fitter materials for convivial Discourses, and the entertainment of Learned Men, than for Institutions of Philosophy; If these be lopp'd off, the*

Remains

Remains of Natural History will come to little.

To perfect the first History of any Disease, 'twill be necessary for the Historian to mark down in his Observations, not only the small'st Accidents that fall out from Day to Day in any Disease, together with their Violence, Progress and Termination for better or for worse; but likewise the minutest Circumstances of Time and Place, the Season of the Year, the antecedent and concomitant Causes, the method of Cure, and the Remedies made use of: In a word, all things that are either Antecedents, Concomitants, or Consequents of the Disease. For the omission of the very least Circumstance uses to stop or perplex the effect of the whole Observation, and even to interrupt the true service of the History. All things, I say, are to be describ'd with that diligence and nicety, that if any doubtful or uncertain thing falls out in the course of an Observation, it must not be conceal'd or suppress'd (which indeed is too common a fault among all the writers of Observations) but ought to be plainly and distinctly describ'd under a caution or remark. For the truth or falsity of Experiments, will soon be laid open by the truth or falsity of the Axioms. Nay, further, that the verity and integrity of the Observation may be yet more apparent, the very way and manner of Observing must be set down, that so Men may be left to their liberty in judging and examining, whether that method of Observation is to be relied on or not, and others may be excited to find out more accurate Methods. To conclude, nothing will be more conducive to the perfecting of this History,

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than the abundance and fertility of the Collection of Particulars, for by that means the inquisition and construction of Axioms, will be gone about in a more easie and expedit way, than upon a barren and undigested Stock.

III.

After our Historian has spent a due portion of time in making Observations, and diligently survey'd the Nature of the Disease in hand for several Years, and committed all to Writing; his next care must be to attempt some disposition of the Matter, and gradually advance his Experience, which is yet but Empirical and Stupid, to a literate degree. For such Observations are like the Letters of the Alphabet, useless indeed in themselves; but when variously joyn'd, mutually collated and rang'd in order, they make up the true Idiom of Nature. The Disposition I speak of, consists chiefly in sorting things of greater importance into Heads and common places, and ranging whatever is discover'd by Observation, under a proper Title. For example, after the Historian has made a thousand or two thousand Observations of the Cholick, he divides that collective Body of Observations into Diagnosticks and Prognosticks, some constant, some inconstant; Causes of several Classes, and of several different Influences: The Seasons of the Year, and the Constitutions of the Weather that prevails most for the time; Symptoms, some constant Companions of the Disease, and others veering about and frequently disappearing; the events, some happy some fatal, of the Indications taken, the success or unfavourable issue of Remedies exhibited.

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These, and such like, must be the Articles of *Inquisition*, as I call 'em, and after the History is collected, whatever is of a piece with the things rang'd under such and such Articles, must be plac'd accordingly; that so the History being duly divided and distinguish'd, he may make an orderly and certain Induction for the establishing of Axioms or general Precepts.

IV.

The method of Digestion pretends only to make an orderly and digested Body of those Particulars which formerly lay straggling and unparcell'd; to reject such things as are false, and guard with proper Cautions any thing that's doubtful, inconstant, and common to other things that seem to resemble it. In the Diseases of the Breast, for instance, Diureticks are found to be generally the best Med'cines; rejecting withal the acid Diureticks which gall the Lungs, and fix the Blood within 'em. The Jesuits Bark is truly an undeniable Remedy for the Cure of intermitting Fevers; bnt it must not be given if you suspect an Inflammation of any of the Viscera, or an inward Imposthume, or a debility and preternatual Disorder in any Part; for in such cases it does not remove but inflames the Fever, and by throwing the whole morbifick Matter upon the affected Part produces fatal Inflammations, and at last a Gangrene. Further, the Jesuits Bark is of use in intermitting Fevers, provided 'tis not given in the beginning while the humours are yet crude; for sometimes it does not

take

take off the Fever, or if it does, a few days after the Fever returns; nay, which is yet worse, oftentimes the Bark thus exhibited gives rise to new Dystempers, namely, Asthma's, Dropsies, Dysenteries, Rheumatisms, Suppressions of wonted Evacuations, and the like, as we learn from the repeated Experience of our modern Practitioners. The *Jovial Bezoardick* is a soveraign Remedy for pacifying the violent pains of the Parts, for it checks the impetuosity of the raging Spirits and Salts in a minute; but in the mean time you must take care that these pains are not Gouty, Venereal, or the like, the matter of which being thereby imprison'd, might raise greater Evils; you must likewise avoid the giving of it in the Disorders of the Nerves, and some grievous Diseases of the Head, such as the Apoplexy, Palsy, *&c.* for 'tis unfriendly and prejudicial to the Nerves and the Brain. Now the same method must be follow'd in tacking due Cautions to things of greater importance in this our History, such as the Diagnosticks, the Prognosticks, the chief Symptoms, the causes of any kind, *&c.* For an Induction run on by a single Enumeration, without joining due cautions to doubtful things, and such as bear an Analogy to the Phænomena of another Disease, the mask of which they sometimes put on; or without rejecting such particulars as are false and inconstant; such an Induction, I say, makes a lame Conclusion. On the contrary, a laudable Induction, to use my Lord *Verulam*'s Words, is a certain form of demonstration that defends sense, illuminates and perfects the Mind in a just deduction of Conclu-

sions, and keeps close to, and mingles in a manner with Nature.

V.

A sufficient stock of Particulars being thus got in, our Observator must then call up his own Judgment, and begin to thing of forming some general Precepts, comprehending the sum and quintessence of the Art. And indeed, if apprehension and thought be necessary in any case, this must be it; that like a Divine Fire it may inlighten this huge and obscure Desart of Particulars, perplex'd with such a fallacious similitude of Things and Signs, an intricacy and intanglement of Causes, and an ambiguity of ways. This illumination is necessary, that so we making a discreet use of our Judgment, may mount upwards by degrees, and climbing with constant labour up the steep ascents of morbifick Matters, one after another, may at last reach the top heighth of Nature where the Air is clear, and affords a true prospect of Diseases, and from whence there leads an easy and gentle descent to the method of true Practice.

VI.

These general Precepts, the ancients call'd *Aphorisms*. Now, the *Aphorisms* are like Road-marks and standing Beacons, to direct us in surmounting the difficult cures of Diseases; which in ancient times were not meddled with but by Men of the best Learning worn out with Age and Practice, Men of pointed Thought in spying

ing the subtilties of differences, of Patience in doubting, deliberation in asserting, and prudence in making a just Disposition, *&c.* But now a-days the sorryest Apothecary's Boy claims a right of pronouncing Aphorisms and Sentences in Physical Matters. The Physicians take up the most general Propositions from two or three Experiments, made, as 'twere, at random; to the too too manifest detriment of the most noble profession, and the disgrace of the Professors. But for the purpose.

When our Observator has labour'd sufficiently himself in the wide extended Field of Observations, and learn'd exactly an Alphabet of the Nature of Diseases, he ought not to fly presently to the most general things in a compendious precipitant way, a way that's unpassable to Nature, and expos'd to Disputes; but must rise gradually by winding about, in ascending and descending, and by penetrating sufficiently into the Mass of Particulars; and when he has thus reach'd the most general things, he must afterwards deduce from 'em middling Propositions and Axioms. That desultory way of abstracting from Particulars, not well known, nor duly examin'd, to Generals, some Affirmative, some Negative, is sufficiently exemplified in the Writings of later Authors. Upon a few Observations of Inflammations and Impostthumes in the Viscera of some that dy'd of malignant or inflammatory Fevers, *Henry Screta* had the assurance to affirm, that all Fevers proceed from the latent inflammations of the Parts: And having likewise derived the Origin of Hectick Fevers from the same source, he still prescrib'd for

these (as well as the other Fevers) Diaphoreticks and Aperients of several sorts, with intent to dispel the pretended latent Inflammations and Imposthumes. Now, he's in the right of it, when Hectick Fevers take rise from such Causes, but not when they spring from Causes of a quite different Nature, *viz.* oversweating, a simple Gonorrhæa, the Whites in Women over-suckling in Nurses, a *Dysentery*, a *Diarrhæa*, a *Diabetes*, immoderate Salivation, over-watching, over-working, *&c.* In which cases the *Hectick* is bred, not by latent Abscesses, as *Screta* fancies, but by too great a Consumption of the nutritious Juice; and the method of Cure ought to be vary'd in pursuance of the variety of such Causes. But 'tis needless to insist on further Instances of unseasonable abstractions from Particulars, since they are so obvious in our Modern Books.

To make a standing and perpetual Axiom, you must take care it be commensurable to the Particulars from which 'tis drawn; and runs neither higher nor lower than the Importance, Verity, and Extent of the Particulars will allow; that is, that 'tis neither carry'd so high as to end in abstracted empty Notions, nor confin'd to such a narrow low compass, as to rest in the confusion and stupidity of Particulars. Let it be like Water which rises in the Fountain, as high as it falls upon the descent from the Cistern. In Abstractions of this nature, we must take care above all, that the Mind be directed by Prudence to have the Particulars always in view, and be not left to itself, as being apt in its own Nature to soar to abstracted things, without a mature

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Consideration of the interjacent Propositions. This Rule was religiously observ'd by *Hippocrates* in his Aphorisms, his Predictions, his *Coacæ*, and most of his other Monuments; which ought to be a Pattern to us in the forming of new Axioms. By this time a day our Profession had been well stock'd with Axioms, if they had cleav'd to the Womb of Nature in the later Ages, and suck'd in the wholsome Milk of Observations; but being snatch'd from Nature's Lap, and bred up in the Schools of Disputes, 'tis no wonder we are now so scantily provided; and that all the advances made since the *Coans*, by the *Arabians*, and some illiterate contentious Men among the Latines, are only the idle jargon of Old Men, address'd to unskillful Boys.

VII.

In fine, nothing contributes more to the truth of Axioms than an exact and rigid description of all, even the meanest and almost useless Symptoms of Diseases: And indeed nothing has been a greater hindrance to the perfection and progress of the History of Diseases, than the preposterous Study of Physicians, in marking down and amplifying things of a larger extent, and neglecting obscure and mean Circumstances. Nature makes no Efforts in vain; and sometimes the least things are the beginning or first Elements of the great ones; not to mention that the least conduct us to the knowledge of the greatest. Wind breaking downwards, is reckon'd a mean and immaterial Motion; and yet in a Dysentery the breaking of Wind downwards, after its absence for

some time, is a sign of a speedy recovery: In a desperate Iliack Fit, if a great deal of Wind breaks downwards with a stink, 'tis a harbinger of Death. This I observ'd upon a Man of sixty Years of Age at *Rome*, in the Year 1693. If a Child handles its Belly often, 'tis a sign of Worms. If a thick slime gathers upon the Teeth in Fevers, the Fever will be high, *Hip. Sect.* 4. *aph.* 53. Red-nos'd Persons are of a soluble Body; *Hip. Epidem.* Much Sweating without a manifest cause in the time of Sleep, is an argument of over Feeding; or if the Person do not eat much, it speaks that he wants Evacuations: *Hip.* 4. *Aph.* 41. A great many things of this Nature that appear in the Course of Cure, are over-look'd and slighted by Physicians, as being useless and of no importance; whereas they are in effect as capable to give Light and Service, and afford Diagnosticks, Prognosticks, and Indications of Cure, as Circumstances of larger Extent and greater Importance.

CHAP.

CHAP. IV.

Of the Erecting of Colleges for the improvement of Practice.

§. I.

THE Work we have thus cut out, is a Work of so much Labour and Meditation, that it requires not one or a few, but a whole Society of Learned Men: And for this Reason I think it necessary, that in great Cities which have large Hospitals, the respective Princes should settle Colleges of Physicians in order to the improving of Practice by History and Observations. We see other Arts and Sciences flourish by such liberal Settlements, and 'tis convenient their liberality should extend in like manner to Physick. Such a College of Physicians, or such a practical College, as I now propose, ought to be divided into two Bodies, one set apart for reading the Books that contain Observations, and the other for making and setting down new Observations. As for the 1st (which shall go by the name of the *Literate Society*) they must have recourse to such Authors as write, not Paradoxes or uncommon and strange surprizing Stories, but the faithful and true accounts of the Diseases that frequently happen, taking particular notice of the Seasons of the Year, of the antecedent or occasional Causes of the Distemper;

of its Rise, Progress, and Declension; of the Symptoms that appear from Day to Day; of the Translation of a Symptom of one kind into that of another in every Period of the Disease; What Benefit or Detriment accrues to the Patient in any Period of the Disease from the accession of any new Symptom, from the exhibition of any Remedies, from the pursuit of such and such a Method of Cure, *&c.* I mean whether Health or Death insued, whether the Disease was thereupon prolong'd or shorten'd, or rather, whether 'twas transfer-fer'd from one Species to another of a very different Nature. Let every Fellow of this Literate Society have one Disease allotted him for the task of his whole Life, which he ought to pursue after this manner. If the Pleurisy, for instance, be his Subject, let him read all the Histories of Pleurisies related by Observators, and other Learned Physicians, and mark 'em down in a Paper Book provided for the purpose. After they're thus mark'd down, let him consider 'em with attention, and then fall about the investigation of the following Heads, *viz.* The Nature or Idea of the Disease in general, the Diagnosticks and Prognosticks, the Cautions and general Precepts, the most accurate Methods of Cure, the choicest and almost specifick Remedies, the mutual Transmutations of Symptoms and Diseases, with the measure of their duration, the Efforts, Method, and Order of Nature in expelling the morbifick Matter. All these he must sort into their proper Classes, and range 'em under their respective general Heads, as I intimated

timated above. By running thus through all the Histories of Pluriſies, he'll diſcover, *for Example*, that dry Pluriſies without ſpitting are hard to be cur'd, and pernicious: That all ſpittings which do not leſſen the pain, are bad; but thoſe which give eaſe are of a good Character: That pains in the Sides in old Men are for the moſt part Mortal, chiefly becauſe they have not ſtrength to diſcharge the Matter: That Purging in an acute Pleuriſy, attended with an over-bearing Inflammation, ſtops the ſpitting, feeds the Inflammation, and makes way for the Phthiſick and Suppuration: That in all Diſeaſes of the Breaſt, eſpecially thoſe accompanied with Inflammations, Purgatives are generally hurtful, and on the other hand, Diuretics, expectorating Med'cines, and the bathing of the Feet, give relief: That repeated Bleeding follow'd by ſeveral Draughts of a pectoral decoction taken down as hot as it can be bore, will quickly take off the moſt obſtinate, and in a manner ſtrangling Pleuriſies: That a Looſneſs in a Pleuriſy is generally fatal: That the pleuritick Pain riſes for the moſt part to the Throat, Breaſt, Back, *&c.* That Perſons much ſubject to Pleuriſies, die oftentimes of a Pleuriſy, or of a *Peripneumonia*: That the ſooner the ſpitting comes, the ſooner the Pleuriſy's cur'd: That in a malignant Pleuriſy the ſafeſt way is not to Bleed: That cold Drink kills many pleuritick Patients, tho' at the ſame time Phyſicians aſcribe their Death to other occaſions. Theſe, and an infinity of other poſitions, will our Hiſtorian gather from ſuch Hiſtories; which, tho' they lye ſtraggling and undigeſted, yet

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they contain something that relishes of the natural Oare, and answers nicely to its Laws.

I mention and recommend this Method of illustrating and amplifying the History of Diseases by Observations cull'd out of Books, lest such a quantity of Ware taken from Nature's Shop, should lye more or less bury'd in proportion to the solidity or levity of those Authors, and for fear the elaborate performances of Men of the best Learning should be doom'd to perpetual Oblivion. Besides, one Man is not sufficient for illustrating the whole Province of one Disease; so that we lye under a necessity of taking in Materials from all Hands. This *Galen* hints at; *Cap. 9. de Subfigur Emp. Since*, says he, *The Life of one Man is not sufficient for the invention of all things, History collects the Observations of aged Time, that by the instruction of many Men in several Ages, one Man may become very Learned.*

II.

The other Body of this College to which we shall give the Name of the *Practical Society*, must be intirely taken up in finding out and marking down new Observations of Diseases, and pursue the same measures in that Office that we laid down above for the literate Society in theirs. That is to say, every Member of the Society must take a particular Disease for his Province. I have shewn at large in the foregoing Chapter, how the History of Diseases is to be made by Observations taken at the Patient's Bed-side; and in what manner Aphorisms and general Precepts are to be deduc'd

duc'd from thence. But to set the Matter in a clearer Light, I shall here recapitulate what I pursued there at more length. In regard, the History of Diseases consists in their Symptoms and Phænomena for the time; an Historian ought to display his utmost Efforts in setting forth the very least and meanest of 'em just as they are in themselves, or are related by the sick Person. How far Authors have hitherto been faulty upon this Head, is evident from their Writings; for in treating of any Disease they consulted Books and their own Fancy, without any regard to Experience and the Book of Nature; from whence it comes to pass that the Symptoms they ascrib'd to Diseases, are either not met with in Practice, or found to be of a quite different Form from what they are represented to be. In the second place, our Historian ought to inquire, and after long enquiry determine what Symptoms are constant, and, as 'twere, the perpetual Diagnosticks of the Disease allotted him; and these he must distinguish from the other fortuitous and common Symptoms, and such as retain rather to a different Method of Cure, and an almost infinite combination of Causes, than to the Nature of the Disease. 3. He ought to remark the Nature, Violence, Progress and Issue of the Symptoms, and take notice what transmutations of Symptoms happen through all the periods of the Disease. 4. He ought to observe the Temper, the Degree of Violence, the Progress and the Exit of the Distemper itself, and its change for better or worse upon the arrival or retreat of any Symptom. 5. He ought to mind what Symptoms

ptoms disappear, or what increase, upon the exhibition of any Remedy, or the using any Method of Cure in every period of the Disease. The same Remark is to be made upon the principal Disease after the exhibition of Remedies, or applying a Method of Cure. 6. He must set down what Symptoms accompany the Disease to the last, with the degree of their violence in every period; what Symptoms take leave of it in a short time, and when; and what alterations are made in the Disease upon their disappearing or returning. 7. He ought to carry the inquisition of all these things through hundreds and thousands of Patients; that so he may rest altogether assur'd of the truth of the matter, and readily form general Axioms; and the Art of Physick like a lively and thriving Plant, standing upon its own Roots, may grow and be confirm'd. At the same time that our Historian is imploy'd in marking down the Phænomena of Diseases, he ought likewise to bend his Thoughts upon the giving of separate and particular Histories of the Causes, Diagnosticks, solid Indications or Method of Cure, specifick Remedies, and such other things as relate to the Essence of the Disease, of which more annon. Now, these ought to be the chief Topicks or Articles of Inquisition in the new performances, calculated for amplifying the History of Diseases, by a distinct account of their Phænomena, and the other particulars above-mention'd. 'Tis needless to repeat how lazy, the Physicians, especially of this Age, have been in that matter. Methinks the ancient Fable of *Scylla* would suit

well

well with their Systems of Physick; for the Ancients feign'd that *Scylla* had the Countenance and Breast of a handsome Virgin, but barking Monsters about her Belly. And in like manner many of our Modern Systems look plausible and specious, nay, and promise great things upon the first view, and the outward appearance; but when you come to their Womb, or their parts of Generation, they neither bring forth the Fruit of Practice, nor afford new Light for the finding of that Fruit, but cram us with noisy snarling Questions, with horrid Monsters of Opinions, and the nauseous repetition of former Inventions. In a word, Experience must be our Rule. Experience gave being to our Art, and Example led the way, according to *Manilius*. In the way of Physick Experience is of more weight than Reason; and Reason on the other hand, has more weight than Authority: So that the case of Physick is different from that of Civil Affairs in which the Authority and Acts of the Senate are more regarded than the greatest weight of Reason.

III.

Before I dismiss this Subject, it will be proper to subjoin a few hints of the Laws of this College: And these I would not have to be much different from those of other Learned Societies, especially as to the general Statutes. As for the particular Rules, let this one be minded above all, That every Fellow of the *literate*, as well as the *practical* Society should have but one Disease allotted him for the whole Course of his Life; for such is the importance and necessity of the Subject, that it cannot well be other ways. For considering that a long process of time is spent in collecting a Store-house of Particulars, and disposing and digesting it in the above-mention'd manner; and that a large Stock of Meditation, Prudence, Sedulity, Judgment, and Patience is requir'd in going about it; 'tis evident that the Life of one Man is scarce sufficient for the perfect illustration of one Disease. So that if one were to undertake the discussion of several Diseases, the narrowness of his time can't but oblige him to be guilty of the scandalous Crime of making precarious and useless Transcripts out of other Authors, of inventing several things at pleasure, of heaping up bulky Volums, that make an ostentative show, but do not improve the Art; the tiresomeness of the tedious Inquisition would make him slip into the Errours I have so often censur'd in our Ancestors. For this reason I think the *Egyptians* did well, in allotting to every

Physician

Physician the Cure of one particular Disease.

The Fellows of this College are to meet at set times, at least once a Month, and are to lay their Observations before the Censors. Now the Censors ought to be the Senior and more learned Fellows, qualify'd with a mature Judgment and aged Practice. They must be impower'd to correct whatever is contrary to the Laws and Method of the History. As for the other particulars relating to the Splendor and Dignity of the College and of Practice, let these be adjusted by the Learned Fellows that meet from time to time.

CHAP. V.

Containing a Solution of the Arguments that may be offer'd to the contrary.

§. 1.

AMong the many Objections that may be offer'd in oppoſition to this our Hiſtory of Diſeaſes, this is the chief. Diſeaſes are certain confus'd, unſteddy and diſorderly Effects and Motions of forlorn Nature, when puzzl'd how to defend itſelf; ſo that 'tis a vain Labour to pretend to make a regular and ſtanding Hiſtory of 'em. The Argument ſounds well indeed, but it does not ſtand to Experience. For we ſee that *Hippocrates* has purſu'd that Interpriſe to his infinite Glory, and why may not others make the ſame Eſſay? Beſides, daily Experience is evidence, that Diſeaſes obſerve an equal and individual conſtancy in their Motions and Periods, and keep to certain Rules in their Progreſs and Maturation; that as all theſe things take riſe from a Specifick and peculiar Exaltation or Specification, if I may ſo ſpeak, of the peccant Humour, ſo ſuch Specifications muſt have certain and individual ways of Invaſion and Maturation, with concomitant Symptoms, that are altogether different from the ways of Invaſion and Maturation, and the concomitant humoral Exaltations in other Diſeaſes. And theſe Specifications of the Humours in ſome Diſeaſes are ſo conſtant, that let the Diſeaſe be ſeated where it will, and aſſume what Face

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it will, 'tis always manifested, by certain inseparable Characters, peculiar to its Specification. To illustrate the Matter with an example.

II.

That Specification, or peculiar Nature of the Humours, that produces a Tertian Intermitting Fever, differs vastly from the Specifick Quality of Humours, that gives rise to hysterick Fits, the Pox, and the other Diseases. By vertue of the Morbifick Specification of the Tertian Humour, a Tertian Fever is known to observe the following Course both in Ancient and Modern Times. It begins with a shivering and vomiting, and burns with a biting Heat: The particular Fit is over in the space of twelve Hours, and the intire Body of the Disease disappears after seven rounds, provided the Physician is not out in his Method. Purgation and Bleeding is prejudicial in the beginning. The particular Fits terminate for the most part in Sweating. The Disease will not bear febrifugous Med'cines, till after the fourteenth Day; the Urine is very red and Brick Colour'd (that particular Colour being an almost Pathognomonick Sign of this and the other intermitting Fevers) and so on. Now that I am speaking of this Urine, I must observe by the Bye, what repeated Observation has taught me, that the Diseases accompanied with that Urine, proceed (if not all, at least most of 'em) from the Specifick Source of intermitting Fevers. In confirmation of this Remark, I have often times experienc'd that some Periodick Pains, and other Diseases exasperated at

set times, were accompanied with a very high colour'd or Brick colour'd Urine, as if they had been the Off-spring of Periodick Fevers; and were happily cur'd, after a fruitless trial of other Remedies, by attenuating, bitter and antifebrile Med'cines prudently administer'd; that is, seasonably and in conjunction with diuretick or purgative Ingredients, as we are wont to do in intermitting Fevers. What we have said of the Specification of a Tertian Humour, may be apply'd to all other Diseases. The Hysterical Illness (for instance) is produc'd by a Specifick peculiar exaltation of the Humours, and accordingly is cur'd by such Remedies as are calculated for it in a peculiar manner. It invades the Patient with Symptoms that retain oftener to it than to any other Disease, namely, a sense of strangling, Passions of the Heart, an oppression of the Senses, convulsive Motions both of the Abdomen and the other parts of the Body, a sense of Cold in the Crown of the Head (the greatest Diagnostick of Hysterick cases) and a chillness in the extream Parts.

The above-mention'd Symptoms appear when the Hysterick Humour ranges here and there, and is not yet settl'd; but if it happens to fix in any one part, it produces Diseases and Symptoms peculiar to that Part. Thus, if it fixes in the Head it assumes the form of an Apoplexy, or a Head-ach, or other Disorders of the Head; if it seizes the Nervous System, it appears in Convulsive Motions; if it fixes in the Heart, Palpitations and Anguish insue; if in the Lungs, a Cough, Asthma, and the like, are the Consequence; if the Gut Colon

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is affected, it resembles a most obstinate Cholick; if the Kidneys or Loins are the seat of its residence, it humours nephritick Pains exactly; if the Bladder, you have a suppression of Urine; if the Ventricle or Intestines, it produces a Vomiting and Looseness; and so on. So that if a Physician be not very sharp sighted, and well vers'd in his Business, if he is not aware that the specifick Cause of one Disease often times personates that of another that's quite different, he'll take the foregoing Diseases, to proceed from Causes peculiar to themselves, or to the part affected, and will labour in vain in the prescription of vulgar Remedies, to the great detriment of the Patient; whereas in effect, they depend immediately upon the hysterick Spring, and after a fruitless use of other Remedies, are cur'd in a Minute, with nothing but Anti-hystericks. The same may be said of the Pox and such other capital Diseases; of which more at large in the Chapter of Causes.

III.

Further; Diseases are so constant and orderly in their Motions, that they observe a regular Course, not only in the Invasion and Progress, but likewise in the declension and exit. Accordingly we see some Morbifick Causes perform their maturation and depuration in the space of a few hours, others in so many Days, others in a determin'd number of Months, and others again in so many Years; and sometimes when Nature is strong, they terminate of their own accord without the

assistance of Physick. Not only *Hippocrates* but Experience is Evidence, that an exquisite Tertian, if left to it self, will terminate in fourteen Days, for so much time does the specification of the tertian Humour require to compass a depuration; and prescribe what Remedies you will to extirpate a Tertian before that set time, they are all ineffectual. As for the objection, that a Tertian may be stifl'd in the bud by the use of the Febrifuga; I own that sometimes it happens so; but then, the Disease either breaks out again with greater Fury after a few Days, or puts into its place several grievous Distempers, such as, Asthma's, Dropsies, slow Fevers, Phthisicks, *&c.* But of this more annon. For the same reason, Purgation and Bleeding is pernicious in the beginning of intermitting Fevers; for daily Experience is witness, that upon the use of these Remedies, the Fever is either duplicated or inflam'd. 'Tis true, it falls out very often, that exquisite Tertians go beyond fourteen Days and extend even to Months; that a Pleurisy lasts after the seventh or fourteenth Day, and so of the rest; but that must be attributed, either to a contrary method of Cure, namely, when we disturb the course of Nature, and the gradual separation of the peccant Humour, by Bleeding and exhibiting Purgatives and violent Diaphoreticks in the beginning, in which case the Specification of the tertian Humour is sunk, and a new specification arises, with a new Train of Symptoms, and a new vicissitude of Periods, which lasts till the separation of the impure Humour is perform'd by the set Laws of Nature, or till

we light on a remedy, that directly extinguishes that Species, upon which head the Doctrine of specifick Remedies is grounded: It must be imputed, I say, either to this irregular method of Cure, or to new and predominant constitutions of the Air, or to some flaming irregularity in the conduct of Life, or else to other violent Causes, that are able to disturb the regular motion and specification of the tertian Humour, and put it by the due term of maturation.

IV.

What is said of the tertian Fevers, must be applyed to all other Diseases, particularly those of an acute form, in which the abovemention'd maturation, and separation of the peccant Humours, are more manifest than in others that approach to the chronical Class. In the business of maturation, the Conduct of Nature is much the same, as in the production and maturation of Plants, Animals, and other things; for in both these Offices it moves in a certain constant and immutable order, unless it be put out of its byass by violent Causes, which by that means give rise to Monsters and abortive Productions. And as Animals, Plants, *&c.* undergo their specifick and peculiar Mutations in a constant order; as they grow and flourish, some in *May*, some in *July*, and so on; as they bring forth Seed in regular Order, and at last fade away: So Diseases by vertue of the specifick and peculiar exaltation of the Humours, do, all of 'em, observe their respective Periods, and carry along with them their peculiar Symptoms.

ptoms. Thus, the Pleurisy is accompany'd with five constant signs; the Dropsy and other Diseases are attended by their peculiar Symptoms, pursuant to the Observations not only of our Age, but of the earliest times of Antiquity. We must not therefore dispair of obtaining an exact and standing History of Diseases, by reason of the foregoing Objection: for 'tis fairly prov'd that Nature in all her concerns, proceeds in a grave, constant and perpetual Order: And if by the violence of Causes, it be jostl'd out of its Road, it flies out into Monsters, abortive Productions, and manifest Errors; but these happen but seldom.

V.

It may be further objected, that 'twill be a hard matter to compass this History, both by reason of an infinite number of Causes and Circumstances that concur to the Production of Diseases, and upon the account of the various Methods with which they are cur'd. As for the Causes and concurring Circumstances, they will not be always so confus'd, and irregular, but that after long Observation, we may trace the true Motions, Progress and Exit of Diseases; for had such a confusion of Causes prevail'd in all Cases, *Hippocrates* his *Aphorisms Predictions, Coacæ*, &c. could never have been form'd. As to the second Obstacle, namely, the various methods of Cure. 'Tis certain, that by vertue of Method, Diseases assume various Faces, and call up various Symptoms; but then these are secondary and accessory Symptoms, and common to other Diseases, but

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not the fix'd and characteristical Symptoms: or if they are, it happens but very seldom. For take what method you will, in the cure of a Pleurisy, for Instance, you will scarce put aside the pricking Pain in the Side, the difficulculty of Breathing, the hard Pulse, the Cough and the other Characteristicks of a Pleurisy; or if you knock off some of 'em, assuredly you'll never sink 'em all. But to prevent mistakes in the way of Method, and the going upon false Indications, so as to turn Diseases to another course, than what they really and naturally require; I recommend to you the reading of such Authors, who having dwelt perpetually with Nature, and trac'd the Complexion and Cure of Diseases with more Diligence than Noise, have laid down a solid unshaken and perpetual Method of Cure. Such are, among the *Grecians*, *Hippocrates*, *Cælius Aurelianus*, *Ætius*, *Aretæus*; and *Galen*, provided he be kept clear of the fumes of Speculation: among the *Latins*, *Celsus* and the other Authors mention'd above *cap.* 2. So that upon the whole, this Objection ought not to scare us from attempting the propos'd History of Diseases.

VI.

I conclude with this innuendo, that the dissection of the Corps of those who die of Diseases, affords great Light for discovering the occult Causes of Diseases, as well as perfecting and amplifying the History now propos'd. But these Corps are not to be dissected transiently and in a hurry, as many are wont to do. Before you commence the dissection, you ought to take a description of the Disease of which he dyed, marking down the occasional Cause of the Distemper, the train of Symptoms with their Progress and upshot, the motions of the Disease, the attempted method of Cure, the operation of the Remedies, and the other particulars mention'd in the foregoing Paragraphs. When these are once learned, you are then to go about the dissection, and enquire into the seat and cause of the Disease, that is, whether the fluids or solids were faulty in producing the Distemper, where the morbifick Matter sculk'd, and what complexion 'twas of, what degree of Injury the solid Parts have sustain'd, whether they are flaggy or bent, obstructed or open, affected with Convulsions or otherways; whether their disorder is communicated to other remoter Parts, and the like. It must be own'd that several chronical and obscure Diseases, can scarce be set in a clear Light without dissection, and the History of such Cases will never be perfect and entire, unless the particulars I mention'd

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but now be mark'd down before the dissection: for to dissect Corps transiently without a previous Knowledge of the History of the Disease, is of no manner of use for illustrating either the Ætiology or Pathology of Diseases. But of this more at large in our Treatise, *De fibra motrice & morbosa.*

CHAP.

CHAP. VI.

A Specimen of the History of Diseases, containing a description of the Gout, and its practical Aphorisms.

§. 1.

THE foregoing Advances, relating to the manner of forming the first History of Diseases and deducing practical Aphorisms from thence, can't be set in a clearer light, than by giving some historical Specimen of one certain Disease, as a pattern for all the rest; and in regard, it is a common complaint, that the Gout kills more of the Rich and Wise, than of the Poor and Simple, We shall make a short Essay upon that Disease, and freely communicate what Observation has taught us upon that Head, being countenanced in this undertaking by the excellent Dr. *Sydenham*, whose method we follow.

II.

The Gout is a painful Disorder of the joints, that attacks chiefly old Persons, who after spending the better part of their Life in Softness and Effeminacy, and giving themselves up to Idleness, Surfeting, Venery, and an indiscreet use of Wine and spirituous Liquors, discontinue their wonted Exercise as their Years advance, and lead a lazy unactive Life. Sometimes it seizes upon young Men, and those of a thin slender Constitution, but that happens very

very seldom, and is owing chiefly to hereditary Contagion, to intemperate and early Venery, to the discontinuing of wonted exercise, to over-eating, to an indiscreet use of Wine or other spirituous Liquors, follow'd all on a sudden by refrigerating and moistning Drinks, to the spoiling of the first Concoction by severe Study, or by Care and Fretfulness. Those who are subject to the Gout, have large Sculls, with a salacious and robust Constitution, and a habit of Body, that for the most part is full and moist. It is not so severe upon old Men, as upon those of a middling or younger Age. Children, Eunuchs and Women, are seldom or never seiz'd with the Gout. Commonly a general Paroxism returns about the Equinoxes and Solstices, and above all, about the beginning of *February* or *March*. Errours of Diet, the Passions of the Mind and violent Causes, will call up a latent Fit; and as this Fit appears suddenly without any previous signs to usher it in, so it is quickly over, especially upon the removal of the abovemention'd Causes. Some Weeks or Days before the invasion of the general Paroxism the Patient is seiz'd gradually with want of Concoction and Crudity in the Stomach, a heaviness and windy sort of Intumescence all over the Body; all which increase every Day, till the Fit appears.

III.

Now the Paroxism proceeds in the following Order. A few Days before the Invasion a sort of drousiness and a descent of Wind with a sort of spasmodick Disorder is felt in the Muscles of the

the Thighs. The Day before the acceſſion, the Appetite is voracious in a preternatural way. Tho' the Patient goes well and ſound to Bed, yet about Midnight he's awak'd by a Pain that's ſeated for the moſt part in the great Toe, and ſometimes in the Heel, Ankle or Calf of the Leg: Soon after, a ſhivering, ſhaking, and feveriſh Symptoms appear, and undergo a gradual remiſſion; but the Pain increaſes gradually, till it reaches the higheſt degree of violence, about Sun riſe, and variouſly affects the little Bones of the *Tarſus* and *Metatarſus*, with a Senſe, as 'twere, of a Dog gnawing, ſometimes of a preſſure and ſqueezing, and ſometimes of the tearing and dilaceration of the Ligaments. The Pain that the Patient feels upon his firſt waking reſembles that which inſues upon the disjointing of theſe Bones, with a Senſe, as 'twere, of cold Water thrown upon the part affected. The part affected is ſo very ſenſible of Pain, that it can't bear the very weight of the Sheets, or walking ſlowly thro' the Room; the whole Night continues reſtleſs; the Body and affected part, are conſtantly toſs'd up and down the Bed, thro' the impatience of Pain, which begins to abate about an hour or two after Sun riſe, ſooner or later, according to the quantity and groſſneſs of the peccant Matter: At which time the Patient falling into a gentle Sweat drops aſleep, and when he wakes finds a ſwelling upon the part, and the Pain abated. Before the acceſſion of the Fit, there's no great ſwelling upon the part, but only a protuberancy of the adjacent Veins, by which all the aſſaults of the Fit are uſher'd in; for this is a characteriſtick Sign,

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as 'twere, of the approaching Paroxysm, as any one may observe.

IV.

For the two three Days next ensuing, the Pain is very violent, especially towards the Evening, and abates a little after Midnight; but if the gouty Matter is very copious, the Pain continues for several Days. A few Days after that, the other Foot is seiz'd with the same Pain, and that to a degree of violence and duration proportional to that in the first. Thus do the Feet use to be affected successively one after another; but if the peccant Matter be very copious, both Feet are seiz'd at once, and that with equal violence. The first Fits of the Gout use to answer to one another, both in duration and manner of invasion; but after the Gout has seiz'd with violence upon both the Feet, the insuing Paroxysms observe no mutual proportion. However, this is always observable, that they grow higher in the Night time and abate in the Morning. In the Gout, we have an universal Paroxysm, and particular Paroxysms that make up the Universal. The particular ones, return every Day (as I intimated above,) towards the Evening, and after trying the Sick-man's patience all Night, begin gradually to abate towards the Morning. In these particular Fits, I have sometimes observ'd that the posterior are at once milder and shorter, than those which came first, and continue thus to grow gentler and gentler, till the gouty Matter is consum'd, and the Patient restor'd to perfect Health. The Period of the several Paroxysms varies, pursuant to the variety of Ages,

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Constitutions, external concurring Causes and the like. But oftentimes it takes the following Course. If it attacks a Man in the flower of his Age, and one that's seldom subject to the Gout, it spends it self in 14 Days; but when it seizes upon old Men, and those who are often Gouty, it continues for two Months. When it falls upon those who are almost worn out with Age, or a long continuance of the Gout, it seldom parts with 'em till near Midsummer.

V.

The Urine of Gouty Persons is high colour'd for the first fourteen Days, and drops a red sand-like Sediment; nay, the Patient does not void by Urine above a third part of the Liquids he takes in, the rest being kept in the Body. The Belly in like manner is costive in the beginning, and the Appetite flat. Towards Evening a shivering over-runs the whole Body, and during the Paroxism every Joint almost is affected with a heaviness and uneasiness. When the Paroxism retires, the affected part is seiz'd with a violent itching in the form of a Scurf, which falls off, as if the Foot were scal'd. When the Disease is over, Appetite, Sleep, a due laxity, and the other marks of perfect Health, return by degrees.

VI.

Such is the progress of the Gout, when it observes a regular Course. But oftentimes it happens, either thro' an improper method of Cure, or by reason of the obstinate continu-

ance

ance of the Distemper, which transforms, as 'twere, the substance of the Body into the Disease; It happens, I say, that this regular progress of the Gout and its Symptoms is almost perverted, and the Gout is vastly different from itself, both as to its Symptoms and the manner of invasion, and Nature is not able to throw it off after the wonted manner. If the Gout leaves the Feet which are the chief residence of the Gouty matter, or attacks other parts as well as them, 'tis a sign either that an erroneous method of Cure has been followed, or that the vigor of the Body is decay'd while the source of the Gout is considerably reinforc'd, in which case it invades likewise the other parts; namely, the Hands, Elbows, Knees, and the other parts of the Body, both Internal and External. In proceeding thus irregularly, it throws its matter upon the Fingers, and gradually swells 'em up, and after it has sufficiently fill'd their Joints, then the Fingers are wreath'd like a Parsnip and begin to lose their motion, and at last hard stony Concretions appear in the outer surface of the Joints, which in process of time do by their Acrimony eat thro' the Skin and Cuticle of the Joints, and at last appear in the form of Chalky Concretions or round Balls of Harts-horn. Nor does it only infest the Joints of the Fingers, but even that of the Elbow, upon which it uses to raise a whitish Tumor to the bigness of a Hen-Egg which is freqently inflam'd or very red. When it falls upon the Articulation of the Thigh, it causes such an uneasy sensation, as if a huge Weight were hung upon the Thigh, but without violent Pain;

but

but when it descends from thence to the Knee, it carries along with it a most dismal pain, and almost takes away the motion of the Joint, so that the Patients lie unmoveable as if they were nail'd down; or if they offer to move they undergo an unspeakable torture, with a disquieting uneasiness all over the Body, that's familiar to this Disease beyond others.

VII.

If a Regular *Podagra* that appears towards the end of Winter, and finishes the general Paroxysm in two or three Months; this *Podagra*, I say, if it assumes an irregular Course, and takes deep root in the Body, it afflicts the Patient for the whole Year, abating for two or three Months in Summer, and the particular Fits do not observe a natural succession or termination in the space of twenty four Hours, as before; but make a period of fourteen Days, more or less, during which time they torture the part afflicted to a miserable and constant degree, especially if the Feet or the Knees are affected. In this long duration of the Paroxysms, the Joints begin to be contracted, and grow unfit for motion, and tho' the Patient makes a shift to walk through the Room with a Stick or People to support him, yet he does it with great pain and difficulty. When the Disease is at this pass, it often times so falls out, that the Patient having made his Feet firm and stronger by thus walking up and down the Room, so that they are not so ready to receive the Gouty Defluxion; the Gouty Matter that us'd to

repair

repair to the Feet, not being sufficiently evacuated by other passages, recoils to the internal Viscera, and there frequently produces mortal Stagnations. In the mean time the Patient is subject to divers Symptoms, which, like the living Off-spring of a long continued Gout, is always hanging upon his Shoulders; namely, a Pain or Swelling of the *Hæmorrhoids*, a wearinesse in the Limbs, great inappetency for the first Days of the particular Fit, and Crudities thereafter, with a *nidorous* Belching, and the Food as 'twere putrify'd in the Stomach, especially if he has eat heartily or fed upon Meat that is not easily digested; but all along the Appetite is in some measure flat; the Back and other parts are affected with a troublesome itching, especially at Night: The Urine that formerly was scanty and high colour'd, is in this state of the Disease discolour'd and copious; nay, both in Colour and Quantity it resembles that voided in a *Diabetes*.

VIII.

When the Disease is at the aforesaid pass, the Patient waking out of his Sleep in the Morning, has a sense of a violent compression and squeezing of the Ligaments of the Bones of the *Metatarsus*. Sometimes when he's asleep, he wakes all on a sudden with a yelling thro' a sense of pain, as if the *Metatarsus* were broke with a Club. In the mean time the Tendons of the Muscles that support the Legs, are seiz'd with a violent and painful Cramp, that surpasses all Patience. When

the Disease has gone to the greatest heighth of duration and violence, and the Patient grows old, the insuing Paroxysms are not so painful and insufferable; partly, because Nature is not able to throw out the Morbifick Matter upon the Joints, so that it tarries in the *Viscera*; and partly upon the account that the continued defluxion of Matter has render'd the fleshy and membranaceous Fibres of the affected Part, almost insensible and obstructed. For this reason the room of the Pain is supply'd with a lassitude of the Limbs, a pain in the Belly, and sometimes a *Diarrhœa*; and when these Symptoms appear, the pains of the Joints are mitigated; but when the Symptoms retire, the pains revive and attack sometimes one, and sometimes another part, fatiguing the Patience of the sick Man, without respite; so that it may be call'd a Paroxysm, not only of the Gout, but of Anger, Sorrow, Fear, and other grievous Passions of the Mind; for the long Sickness does so enervate the Mind, that the least motion disorders it, and makes it sink almost into despondency. The above-mention'd mutual commutation of the Articular Pains and the disorders of the *Abdomen*, is familiar with other Distempers besides the Gout, as I've intimated frequently above; so that the Disorders of the Joints are happily redress'd by such Med'cines as move the Belly; and the Diseases of the Belly are successfully cur'd with the Remedies that throw the Humours out to the Skin; such being the means pointed out by Nature herself. I have oftentimes observ'd, that when the Gouty Matter vanishes

or

or retires all on a sudden, the Patient is seiz'd with violent Pains in the Stomach and bilious Vomitings, and after that with the Jaundice, which is speedily dispell'd with three or four doses of *Rhubarb*. When the Gout makes the first invasion, it creates grievous pains; but as the Patient's Years advance, and the Disease grows old, the pains becomes gentler, tho' at the same time their room is supply'd with that numerous retinue of Evils that I mention'd but now. Tho' the pains are very violent in the first Years of its standing: Yet some amends is made for that violence by the long intermission of the Paroxysms, and the recovery of perfect Health, which does not take place when the Disease is grown in Years, and the Patient bends under old Age. At last the Gouty Person is seiz'd with the Stone in the Kidneys, and voids great quantities of Sand by Urine, whether it be that lying upon the Back, or the disorderly Secretions of the *Viscera* and other Parts, or an analogy of the Gouty Matter with that of the Stone, have given rise to that Disease. In this case the Gout and the Stone succeed one another by turns, and by a vicissitude of Paroxysms make a perpetual Fund of Pain and Anxiety to the Patient. But sometimes the Gout produces not only the Stone and Sand, but likewise other disorders of the Bladder, particularly a suppression of Urine, a difficulty of Urine, an itching of the *Scrotum*, a pissing of Blood, and the like: And if the Gouty Matter be very copious, it causes a long inappetency, a pale Countenance, swellings of the Feet, a tough slime upon the

Tongue, with a bitter and sometimes a salt Taste, and many other Symptoms in proportion to the diversity of the Parts and the Patient's Indiscretion in using the six not natural Things, and regulating the Conduct of Life.

IX.

'Twould be too tedious a task for this place, to run over that long winded Series of Symptoms observ'd in Patients of various Ages, Constitutions, ways of Living, *&c.* which make a necessary part of a compleat History of the Gout. For here I design only to propose a very short Specimen of the *Historia Prima*, that young Beginners may learn from thence the method of gathering the first Elements of Diseases, and that with the same Simplicity and Truth, that accompanies 'em from the Mouth of the Patient. And whoever considers this Model of History, will find I have kept close to the Rules and Method laid down above, and have observ'd a rigid severity both in observing and describing. But to make an end of it. Women are seldom troubled with the Gout, or if they are, they are either Masculine Virao's and striken in Years, or subject to Rheumatisms, and especially the Hysterick Illness, the source of which Disease uses to give rise to Articular Pains. Children and Youths are seldom seiz'd with it, unless they be begot by Parents that were extream Gouty; in which case they have slight Paroxysms sometimes in their tender Years. When the Blood of Gouty Persons, thro' the long

long continued disorder of the *Viscera*, and the defective secretion of the Excrements, and other causes mention'd before, is reduc'd to the last degree of Impurity, and as 'twere Feculency, Death approaches, and by vertue of a Fever, or some other Disease rais'd by the Gouty Matter, carries off the Patient.

X.

Hippocrates, Lib. *de humor.* towards the end, acquaints us that the accession of a pain in the Joints appeas'd a pain in the right side of the Colon; and after the articular Disease was cur'd, the pain of the Intestine reviv'd. This is an argument of the great mutual Sympathy between the Intestines and the Circumference of the Body mention'd so often in this Treatise. 'Tis likewise an argument of that Sympathy between the Intestines and the Urinary Vessels, that *Hippocrates* took notice of in these words, *Colerici, facti Dyssurioſi, omnes judicabantur.* A great many are troubled with the Colick before the invasion of the Gouty Paroxysm, and upon the disappearing of the Colick the Gout presently shews its Head; which is still a further confirmation of the abovemention'd consent between the Glandules of the Skin, and those of the Intestines. Those, says *Hippocrates*, Lib. de judicat. *who are long ill of a Looſneſs, accompany'd with a Cough, are not cur'd till their Feet are ſeiz'd with violent pains.* But there's not only a mutual Sympathy and Transmutation between the Diseases of the Skin and those of the Intestines, but likewise a remarkable consent between the Breast

and the Privities, the Breast and the Legs, and so on. *A violent pain*, says *Hippocrates*, Lib. 2. *Epidem* Sect. 5. *falling upon the Testicles, takes off a dry Cough.* And again, *Lib.* 2. *Epidem Sect.* 1. *If an Inflammation of the Testicles is follow'd by a Cough, the Inflammation will go off; and so upon the reverse.* Again, *Lib.* 2. *Præsag.* 67. *When a Testicle swells upon a Cough, it calls up the Memory of the Society of the Breast, Dugs, Privities, and the Organs of the Voice.* Once more, *Lib.* 2. *Prognostic. All Impostbumes in the Legs, after violent and dangerous disorders in the Lungs, are useful.* A Dropsy in the Testicles dicuss'd and ill cur'd, was follow'd by a Dropsy of the Breast. *Mear. Hist. Med.* If an Ulcer in one's Leg dries up, and thereupon a pain rises in the Breast and Side opposite to the affected Leg, 'tis mortal; *Hip. de morb. pop.* Lib. 4. A spitting of Blood insued upon the curing of an Ulcer in the Feet and Legs. *Rhod. Obs. Cent.* 2. *Obs.* 94. An inveterate Ulcer in the left Leg being heal'd up by an Empirick, a Pleurisy insued some Months after in the left Side, of which the Patient Dy'd; and during the Pleurisy he spit such matter as us'd to run at the Ulcer. *Hildan. Observ. Med. Chirurg. Cent.* 3. *Obs.* 39. An. 1691 I saw a Man die in an *Italian* Hospital upon the curing of a spreading Sore in his Foot. From all which that intimate Sympathy between the Breast, the Legs and the Privities, is more than manifest. But this by the Bye.

An Article of Practical Aphorisms, drawn from the first History of the Gout.

§. I.

MY chief View in giving this short and plain Narrative of the Accidents, or *Historia prima* of the Gout, was to show my Readers the course they are to Steer, in enriching the History of the other Diseases, and even of the Gout it self, by new Observations, which are always capable of Multiplication. It remains now to propose some general Precepts, or practical Aphorisms, which are deduc'd from the first History of the Gout, by repeated Observations made upon Patients of all Ages, Temperaments and ways of Living; and which conduct us directly to the Diagnosticks and Prognosticks and Cure of Diseases. To begin. Those who feed upon Barly Bread, are seldom troubled with the Gout, or Pains in the Joints. While the Gouty Pain is upon you, abstain from a liberal Application of Anodine and Emollient Med'cines; for an indiscreet use of these, breeds first Stony concretions in the Joints, and then contractions of the Parts. There's a wonderful and almost occult Sympathy, between the Joints and the Intestines, for the Diseases of those Parts undergo a mutual Commutation; whence *Hippocrates, lib. de Humoribus*, says, *A Pain in the right side of the Colon, was appeas'd by the appear-*

ance of a Pain upon the Joints. And again, 6. Epidem. 4. 3. *One having a Pain in the Joints, was troubled at the same time with a Pain on the right side of his Intestines, but when the Pain of the Intestine was cur'd, the articular Pain grew worse than before.* Gouty Persons do not die of the Gout, but because the Gout does not fall down upon the Joints. Before the appearance of the Gout, and sometimes after 'tis cur'd, an Oedematous Swelling uses to fall upon the Feet, the Cause of which retains to the Source of the Gouty Matter, which Nature by Laws known to it self alone, and by a regular Crisis, throws out upon the Feet in the form of an oedomatous Tumour. Now, in these Tumours of the Feet, whether before or after the Gout, be sure you make use of no Remedy, whether External, or Internal, to turn off that Matter from the Feet; for I have often times observ'd, that upon the exhibiting of Purgatives, Diureticks, or Sudorificks, that Matter has retired from the Feet to the inner Parts, and produc'd Apoplexies, Asthmas, Fevers, or sudden Death. Nay, this you may infallibly expect, if you apply the external Repercussives commonly us'd in such cases. Wherefore we must Religiously stand off from these external Topicks, and not oppose the course of Nature, which throws out, as 'twere by a Crisis, the nocive Matter upon the Feet. In such Gouty Tumours of the Feet, 'tis conducive to leave all to Nature it self, to take care of the first Concoction, and to mind Diet and Exercise; for I have often times observ'd both at *Rome* and elsewhere, that the above-mention'd Swellings disappear'd by these means.

II.

II.

Sennertus in praxi Tract. de Arthrit. cap. 4. reckons up an innumerable train of Evils, insuing upon the insufficient defluxion of the Gouty Matter to the Joints; to whom I refer the Reader. A Dysentery cures the Gout, and all Evacuations by Stool are beneficial in that Disease. *Hipp.* 2. *Proret.* The Gout begins always in the great Toe. Sometimes the Arthritick Illness and the Cholick undergo a mutual Transmutation. Sometimes it degenerates to a Dropsy and an Anasarca. Before the Invasion of the Gouty Paroxism, the Patient urines, Sweats, and Spits but scantily, he is seiz'd with an Inappetency and a sort of Wearyness, and the Veins of the part, upon which the Gout is a coming, are a little swell'd and distended. *Varices* or dilatations of the Veins appearing in the time of the Gouty Pain, Prognosticate relief. Old Persons and those who are recovering of chronical Diseases, are apt to have the Gout, when thro' errors of the use of the six not natural Things, they sink the Concoction of the viscera. A violent fit of Anger uses to bring a severer fit of the Gout, than what it is at other times. Those who tread often upon Grapes or bath their Feet in Stum, are seldom troubled with the Gout. Violent exercise after eating, disposes to the Diseases of the Joints, and inflames them if they took place before. Tho' the Gout is troublesome in any Age, it gives most trouble to old Men, and to those who give way to Luxury and Sloth, and humour their Appetite too much. Children are not troubled with the Gout before the use of venery.

Hipp.

Hipp. Sect, 6. *Aphor*. 30. Eunuchs are neither Gouty nor Bald, *Hipp. Sect*. 6. *Aphor*. 28. Pains in the Joints do the same service to old Age, that cuticular Eruptions do to Children, and Hemorrhagies to young Men; for the Gout frees old Men from heavy Distempers, to which they are subject, if the Gout does not come; and the same may be said of some Constitutions that are apt to be Gouty. Persons of a weak Stomach that's apt to breed Crudities, are not cur'd of the Gout, till the Stomach is put to rights. Purgatives and violent Diaphoreticks, do not do so well with arthritick Persons. As far as I could gather from diligent Observation, an exact and regular use of the six not natural Things, and stomachick Med'cines, are all in all in Arthritick and Gouty Cases. If the Gouty Paroxysms us'd to be inflam'd about the Equinoxes and Solstices, you ought to pursue some preservative Courses before these Seasons, either by a regulation of Diet, or by exhibiting gentle laxatives, for by this means you'll either quite stiffle the imminent Excursion, or oblige it to come with a milder force. Wine, Venery and Idleness bring the Gout, but the drinking of Water, Milk and Exercise cure it. In Arithritick Cases, some have receiv'd wonderful benefit from Issues. Those who are lyable to the Gout, ought to go to Bed betimes, especially in the Winter; for sitting up a Nights and perplexing of the Mind, injures the Concoction and furnishes plenty of Matter for the Gout to feed upon. But I have already deliver'd several general Precepts of this Disease in the first Book, to which I refer the Reader.

CHAP.

CHAP. VII.

A monitory Schedule of such things as are wanting in our Profession.

§. I.

MY design in this Performance is only to exhort Physicians, to treat of those things that are of greater Importance, and have been either neglected by others as useless, or avoided as difficult and insuperable. With which View, I shall now briefly lay down the series of those weighty things that are still wanting in our Art, to which the Readers may add what further particulars come into their Minds.

We want therefore

A Diagnostick, Prognostick and Curative History of such Diseases and Symptoms, as proceed from the disorder of the solid Parts.

A Diagnostick, Prognostick and Curative History of the Diseases that spring from a disorder in the Fluids.

A History of Diseases, as they are produc'd by divers Causes, or by other principal Diseases.

A Diagnostick, Prognostick and Curative History of the Urines and Excrements retaining to every Disease.

A History, Diagnostick, Prognostick, *&c.* of the condition of the Tongue, as well as the changes and disorders that happen upon the Skin, Eyes, and other Senses, in any Disease.

A History, Diagnostick, Prognostick, *&c.* of the Diseases and their concomitant Symptoms that retain to the Emotions of the Mind.

A History of the ready Diagnosticks of Diseases, and their difficult Symptoms.

A History, Diagnostick, Prognostick, *&c.* of every Disease with reference to the variety of Ages, Sexes, Circumstances, and the various ways of living, especially a few days before the Invasion: a History of Diseases, produc'd by the Suppression of Evacuations, and so on.

A History, Diagnostick, Prognostick, *&c.* of the benefit or detriment accruing to the principal Parts, namely the Heart, Breast, Head, Nerves, *&c.* from some capital Remedies, frequently made use of in the cure of most Diseases, such as Bleeding, Purgatives, Sudorificks, *&c.*

A History of Cautions and Precepts relating to the service or disservice, and the method of prescribing every particular Remedy: of Cautions and Precepts touching the Effects that insue upon the conjunction and mixture of Remedies.

The History of the Invasion, Progress, Cure and Upshot of such Diseases, and their Symptoms, as are more familiar and severe in certain Seasons of the Year, and observe a Periodick Course, if I may so speak.

An Historical series of such Diseases as are truly Acute, or really Chronical, or in effect incurable; incurable, I mean thro' a default in the solid Parts, and the impossibility of the thing, not from the disorder of the Fluid, or the Ignonorance of the Physician.

A History of all the Accidents that are wont to be observ'd particulary in every Disease about the time of Death.

A History of the Causes that always, or for the most part, produce such and such particular Distempers, and not others.

A History of the Diseases in which the Sick retain a clear use of their Senses and Reason to the last gasp, and those in which both Sense and Reason is sunk for several Days before they Expire.

An Exhortation to Physicians, to be always imploy'd in marking down the History and Cure of Diseases, depending upon the new and general Influences of the Air, and the antecedent Weather.

An Exhortation to all Physicians, to describe a Natural History of their respective Countries; I mean the Constitution of the Inhabitants, their Endemial Diseases, the particular Method of Cure calculated for them, the Domestick Remedies, and the other particulars peculiar to the Country.

An Exhortation to Physicians, to find out new Methods for curing those Diseases that are commonly call'd Incurable.

An Exhortation to find out new means to guard off old Age.

A History of the Diseases of the Nose, Eyes, Ears, Ventricle, Liver, Nerves, and other, the more principal Parts. These I take to be the Principal Things that are still wanting for the improvement of Practice. If any one can think of other Heads, especially with reference to the other parts of Physick; I hope he will not disdain to make an addition of 'em to this Sketch.

CHAP.

CHAP. VIII.

Of the Diagnosticks of Diseases; and the Springs from which they flow.

§. I.

AS Lawyers adjust Rights from matter of Fact, so in our way a right understanding of the Disease discovers all the Topicks of Cures. In the cure of such Diseases as admit of any delay, I proceed after this manner. The first Day I spend in examining the Patient strictly about the occasional Causes, and all the antecedent and present Circumstances of the Disease. During that time I prescribe no Remedies, for fear an unseasonable prescription should perplex the ordinary period of the Disease and sink the constancy of the signs, and represent the Disease otherwise than it really is: At least if I prescribe any thing, I take care that 'tis some general innocent Med'cine which may serve at the same time to unfold the nature of the Disease by Observations made upon the benefit or injury that accrues from it. The second day, having maturely weigh'd the foregoing Circumstances, I fix upon the Species of the Disease, and so commence the prescription of proper Remedies. So that the truth of the matter lies here; The first foundation of Cure is a just apprehension of the Disease, and a due distinction between it and others of the like form; for the first Threads or Elements of Diseases lye immers'd in thick darkness, and all the prowess of Art can't reach the cure, without the direction of a solid *Diagnosis.*

II.

II.

The only *Grecian* after *Hippocrates* that made any solid improvement of the practice of Physick was *Coelius Aurelianus*, that glorious Head and Defender of the methodick Sect, who laid so much stress upon the necessity of signs in the cure of Diseases, that he seems to have had nothing in view so earnestly as the detection of the Signs and Circumstances that make the partition Walls of Diseases. And the Learned World agrees that upon this Head he has gone beyond all other Authors, both *Grecian* and *Roman*; for his Works are nothing else but an useful Seminary of Diagnostick Signs and weighty Precepts. Nay, if you take a narrow view of some of his Titles, you'll see that through the whole Series of such or such a Chapter, he confines himself intirely to an exact description of the Signs of Diseases, without so much as touching upon the other Heads. In others again he insists only on a faithful and natural History of the respective Disease; which no other Author since *Hippocrates* has ever given us, excepting Dr. *Sydenham*, who seems to have taken his method of treating and describing Diseases from *Aurelianus*. Tho' the methodick Sect was almost wrap'd up in silence for several successive Ages, after the establishing of the Rational Sect by *Galen*; yet in this our Age it begins to revive; for the coagulation and dissolution of the Fluids, the Tension and Flaccidity of the Solids, to which the Moderns attribute the Origin of all Diseases, is exactly of a piece with

times Practitioners take one Disease for t'other: But above all, the greatest mistakes relate to a *Tuberculum* or hard Swelling in the Lungs; of which *Hippocrates*, *Lib. de Medc.*, says, *'Tis a very artful thing to find out and dissolve the* Tubercula *of the Lungs, or to prevent their gathering.* And Dr. *Willis*, *Cap. de Vomic. Pulmon.* Speaking of the *Tuberculum*, says, *'This disorder lies at first so close and hidden that it affords no signs to betray it.* The same is the Opinion of *Tulpius*, and the other learned Practitioners, who despair in a manner of finding Pathognomonick and Infallible Signs of this Disease, and particularly upon this Consideration, that a morbifick adherence of the Lungs to the Ribs, is attended with the same sort of Symptoms. But after all, so far as I can learn by Observation, the more constant signs are as follows. The Patient being otherwise well begins to breath with difficulty; this difficulty increases by degrees; he does not snort when he breaths, neither does he spit up Matter; he feels a continual pain in his Breast, and can't lye down upon the place affected; he's troubl'd with a dry Cough, his Cheeks are Red, a slight Fever approaches; and at last when the Swelling tends to Suppuration, the other Symptoms of Suppuration take place. In the mean time, there are two Pathognomonick signs of a *Tuberculum* that's yet crude and beginning, namely, a dry Cough, and a slight pain in the outside of the Breast: To which purpose *Hippocrates*, *Text.* 63, *l.* 1. *de Morb.* says, While the *Tuberculum* is yet crude, it causes a gentle pain, and a dry Cough. Those who are ill of this Distemper, die suddenly very often; for after

Sup-

Suppuration the purulent Matter breaks out into the Wind-pipe and choaks 'em. And for this Reason the further 'tis distant from the Wind-pipe and the center of the Lungs, the less danger there is of Suffocation; for in such cases the *Pus* will break into the Cavity of the Breast, or else be thrown out by Urine. If a violent and sudden pain in the side seizes Consumptive Persons, they'll be delirious soon after with a high Fever, and so die in a few days. But when this Pain and the above-mention'd Circumstances appear, you may conclude for a certainty that the Consumption was owing to a preternatural connexion of the Lungs with the Ribs, which repeated Dissection will justify.

IV.

I wish every particular Disease had two or three infallible signs, as well as those I've now mention'd. 'Tis to be wish'd, I say, that some Physicians in all Ages had made it their Business to pursue and improve the Doctrine of Signs; had that been done, questionless the profession of Physick, had arriv'd at its ἀκμὴ long e're now, at least as far as our mortal State will allow. But they thought it a greater business to foil an Adversary by Dispute in *Galen*'s School, than to conquer Nature in the School of Nature by matter of Fact and new discoveries of Signs. In earnest, since two Diseases rang'd under the same Species, are hard to be cur'd (as I have often intimated) without each of 'em be duly specify'd to us by proper Signs; what difficulty will there be in the cure of such Diseases as are under the remotest Species and

infinitely different one from another? For the purpose; when the Diagnostick Sings of any Disease are once found out, the Remedies and Indications of Cure are presently set in a clear light: but if the Diagnosticks lie neglected or undiscover'd, a Disease of one Species is took for another of a far different kind; and so the issue of the Cure not answering the Opinion thus took up, the ignorant Physicians turn their Back upon many Diseases as being incurable; they censure the method of Cure, cry out upon the uncertainty of Physick, deride the Doctrine of Critical Days, and neither know nor care to know the Art of Prognosticating. In fine, upon this false Conception, they judge rashly and inconsideratly of every thing. But after all, 'tis not Arguments but good Works that we must find out; 'tis not probable Reasons but certain Indications of what's to be done, that will do our Business: For our Ratiocination may oftentimes captivate and please the Intellect, but it does not reach the Nature of the thing.

CHAP. IX.

Of the Causes of Diseases.

§. I.

Some Preliminaries calculated for the History and the Division of Causes.

1.

HAving thus gone through the Method of perfecting the History of Diseases by their Phænomena, our next task will be to imbellish it with the Causes that give them a Being; and here

here before we enter further upon this Subject, we cannot but take notice that Physicians are much mistaken, in thinking that some Diseases are Primary Diseases always produc'd by the same causes, and still requiring the same method of Cure; for the repeated observation of the most judicious Physicians makes it out, that such Diseases are not always Primary and the product of the same Causes, but Secundary, and the issue of divers Causes, and consequently that they are divisible into as many Species, as there are principal Diseases and more constant Causes which produce 'em; nay, that each of these Species into which they are subdivided, has peculiar Symptoms, and a peculiar manner of Invasion, Increase, and Declension: And, in fine, that each of 'em requires a quite different Method from any of the rest. This will appear more plainly from the following Example.

2.

The *Galenists* of former times took the Phthisick to be a primary Disease of one Species, springing always from the same source of Causes, namely, The distillation of Humours from the Head to the Lungs, and requiring in all cases the same Method of Cure. Now, how far they are out in this Matter, is manifest from the diligent Observations of *Morton*, and other modern Physicians. For these being taken from the Store-House of Nature, give us certainly to know, that the Phthisick is frequently a secundary Disease retaining to divers principal Diseases, such as the Pox, the Scurvy, the Jaundice, the Green-Sickness, an Asthma, a spitting of Blood, Ulcers internal and exter-

nal, Fevers, Melancholy, the small Pox, a Dropsy, a Dysentery, the Passions of the Mind, hard Study, and a thousand such occasional Causes. And as a Phthisick is foster'd by such various Diseases or Causes; so it carries along with it various Symptoms quite different from the Phthisicks of another Species, and requires as various a Method of Cure, and Remedies of as different a Nature. So that if you neglect to distinguish heedfully the Phthisick of one Species from that of another, and apply the Method of Cure and Remedies of the one to the other, you'll throw your Patient into evident danger, or undergo the discredit of not compassing the Cure.

3.

What I have said of the Phthisick, must likewise be understood of the other Diseases, especially those call'd Chronical; and certainly this is one of the great defects in our Profession, that every Disease is not subdivided into as many Species, as there are primary Diseases to foster 'em, and violent and constant Causes to produce 'em; that the Characteristick Signs of each Species are not given along with the first History, and a standing Method of Cure calculated for each. This Method, we see, is follow'd by the *Botanists*, who under the general name of any one Plant, *Carduus*, for instance, comprehend several Species of *Carduus*'s; and are so sedulous in describing the Magnitude, Figure, Colour, Taste, and other accidents of the Plant, in order to distinguish one Species from another, that their Industry can never be too much extoll'd. On the contrary, Physicians finding some Diseases resemble one

another

another in some Symptoms, comprehend them under one general Title, tho' in effect they ought to be divided into as many Species, as there are principal Diseases or violent Causes to foster them; to these they promiscuously apply the same Method of Cure, tho' the Diseases are really of different Natures, and require different Cures, and ought, each of 'em, to be rang'd under peculiar Heads; like the Species of a Carduus, which tho' comprehended under one Genus, are, all of 'em, treated apart.

4.

The ancient Physicians used this piece of diligence with reference to some Diseases, but they neglected it in many more. The sleepy Disease, tho' it seems to be but of one Genus, was by them accurately divided into several Species, namely, aCataphora, a waking Coma, a sleepy Coma, a Lethargy, a Carus, an Apoplexy, *&c.* and they ascribed to each Species Diagnosticks, Prognosticks, a respective Method of Cure, and the other more necessary complements of its History. Tho' a Pleurisy and a Peripneumonia be one and the same Disease as to the Genus, upon the account of the Similitude of the place affected, the Cause and some other Symptoms, yet the ancient Physicians made two distinct Species of 'em, and allotted to each of 'em a Separate History of Diagnosticks, Prognosticks and Cure. Tho' a Convulsion is a general Disease, both the Antients and Moderns have thought fit to split it into several Species; for besides that great and flaming Illness, call'd the falling Sickness, there are three general Convulsions, call'd,

Opisthotonos, *Emprosthotonos*, and *Tetanos*; besides particular Convulsions of the Mouth and Eyes, the convulsive Asthma, the convulsive Colick, the convulsive hysterick Fits, the Convulsions of the Muscles of the Abdomen, and many other Diseases retaining to inward Convulsions; tho' Authors have not yet rank'd 'em under their proper Heads. Having mention'd the Convulsions of the Muscles of the Abdomen, I can't but take notice by the bye, that tho' they are very unfrequent, I had to do very lately with a Patient of 40 Years of Age, the Muscles of whose Abdomen were affected with violent subsultory Motions and Convulsions, and who recover'd upon the voiding of Blood by the hemorrhoid Veins, the injection of Milk Clysters, and the drinking of a due quantity of the Oil of Sweet Almonds with the Syrup of red Poppies dissolv'd in large quantities of Broth or Decoctions. To return. We have not only the above-mention'd Species of Convulsions, distinguish'd under respective Heads, but likewise their Diagnosticks, Prognosticks, and Precepts of Cure; and as accurate a Description of their first History, as was consistent with those unpolish'd Times, in which Physick in conjunction with all good Arts, was run down by the Northern Nations, upon the declension of the *Roman* Empire.

5.

We see every Day that every principal Disease personates another of a very remote Species. The Hysterick Illness (for instance) not contented with its familiar Accidents, such as a sudden oppression of the Senses, a Sense of Strangling in the Throat and cold in the crown of the Head, Convulsions of the Parts,

&c.

&c. oftentimes impoſes upon Phyſicians under the appearance of a Head-ach, Apoplexy, Palpitation of the Heart, a Cough, an Aſthma, a Colick, a Vomiting, a Looſeneſs, Nephritick Pains, a Swelling and Pain in the Legs, a chillneſs of the extreme Parts, grievous Pains in the Back, and a great many ſuch Diſeaſes. I was lately call'd to a noble Lady that was ill of an Aſthma, and deſpair'd of Recovery, after the fruitleſs uſe of Antiaſthmatick Remedies for three Months together, and being inform'd that ſhe was frequently ſubject to Hyſterick Fits, and in her preſent Condition was almoſt never without a Senſe of Cold and a ſort of Pain in the crown of the Head; I did not ſtand to aſſert that her Aſthma retain'd to a Hyſterick Original. Accordingly I preſcrib'd the Salt of Tin in Balm-Water, and apply'd to her Navel *Minſichtus's Emplaſtrum Matricale*, which has the Salt of Tin in its Compoſition; and in the ſpace of a few Days ſhe recover'd perfectly. A young Man at *Rome* was ill for eight Months, of a violent and very painful *Ophthalmia* or Inflammation in his Eyes, and coming to me after a vain Trial of all ſorts of Remedies, I began to be ſuſpicious of ſome violent Cauſe or principal Diſeaſe that perſonated an *Ophthalmia*, and accordingly ask'd him if he had ever been tainted with a venereal Illneſs. He made anſwer he had been ill of a Clap about 8 Years ago, and was cur'd of it in two Months time. Upon this, being ſenſible that the Seeds of that contagion, ſtick oftentimes to the Blood for 30 Years and above, and after apparent Health break out in the form of ſeveral Diſeaſes; I preſently concluded that the *Ophthal-*

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mia was Venereal, and cur'd him in ten Days, with large quantities of the Decoction of *Sarsaparilla*, crude Antimony, *&c.* drunk like Mineral Waters. From these and other Instances, which for brevity's sake I pass over in silence, I may justly conclude that Physick would receive considerable Benefit from a division of Diseases into as many Species, as there are principal Diseases or violent Causes to foster 'em. For if we had had an exact and faithful History of the Prognosticks and Diagnosticks, the method of Cure and the general Precepts of an Hysterick Asthma, and a venereal *Opthalmia*, the Physicians that these two Patients consulted at first, had not been impos'd upon, as they were. Infine, without such Divisions, the History of Diseases will be crouded with Errors and cover'd with Confusion.

6.

How many mistakes were the Ancients guilty of, in curing the convulsive Asthma, and not knowing that it proceeded from Convulsions; till at last the Moderns observ'd that it arose not from a viscid Humour crouded upon the Lungs, but from the Convulsion of the Muscles of the Breast or Midriff, or of the fleshy Fibres interlac'd with the Lungs? With which view, they christen'd it the Epilepsy of the Lungs, and allotted it a separate and distinct History of Diagnosticks, Prognosticks, and Cure. The Ancients were equally gravell'd in the cure of a Convulsive Colick, till *Fernelius* discover'd that it proceeded not from the cold Humors in the Intestines, as they

they call'd 'em, but from the Irritation and Convulsion of the Nerves of the Mesentery; and that 'tis exasperated by Purgatives, Glysters, and hot Remedies, but appeas'd by *Anti-spasmodick*, Dulcifying, and Anodyne Med'cines. The same method ought to be observ'd in treating all Diseases, especially those call'd Chronical, the Fermentations of which are long winded and constant, whereas those of Acute Diseases are short, and are produc'd by slighter Causes; nay, they finish their Ebullition under the appearance of a principal Disease, as is manifest in Fevers, Quinseys, and other acute Disorders.

§ II.

Of the Antecedent Causes call'd Procatarctica *and* Proegumena.

1.

There's nothing so difficult as the investigation of the very first and immediate Cause that calls up Diseases and disorders the Patient without any other *Medium*. 'Tis this that has occasion'd the fatal Mistakes and Divisions that Physick now groans under. For we being destitute of Intuitive Knowledge, and uncapable to trace the secret motions of Diseases with the Eye of Reason, are oblig'd to have recourse to the repeated use of our Senses. But all Physicians have not observ'd the same Conduct in the use of their Senses. In ancient Times *Hippocrates* and his fellow *Grecians* laid so much stress upon the Efficacy of the

the Senses in inriching Physick, that, as *Petronius* said of *Democritus*, They spent their Life in the midst of Experiments, and so obtain'd a more intimate knowledge of the causes of Diseases, only by the constant and uninterrupted exercise of their Senses. And tho' they could not compass every thing, as it appears from what fragments of their Works have surmounted the envy of Time; yet they went so far, that they drew the Curtain from before the Nature of Diseases, and dispell'd the Clouds that obscur'd the Truth. But the rest of the Physical Family that made Head against Diseases in the succeeding Ages, quitted the use of Sense, and rack'd their Wits to find out the true secret of the causes of Diseases; and in regard, that is not to be reach'd by Reason without the concurrence and cooperation of the Senses, all their advances of the causes of Diseases are nothing but groping in the Dark; so that they have only diversify'd the outward denomination of Diseases by various ways of speaking, without touching upon the Essence and real Cause.

2.

To observe a regular Method in this Enquiry; we must take in the ancient division of Causes into the *Procatarctica*, the *Proegumena*, or Disposition of the Body, and the *Causa Proxima*, or that which is always accompany'd with the Disease, and without which the Disease can't be. The external Antecedent or occasional Causes call'd *Procatarcticæ*, whether Internal or External, are oftentimes slighted by Physicians, upon the account, that after the production of the Disease, they either retire altogether, or are conceal'd by the Patient: So that they bend all their Thoughts in considering and extolling the *Causæ Proximæ*, that lie remotest from the Verge of the Senses. Now, this is all against the Grain; for we ought to take Indications of Cure from the least Circumstances, and from Causes of any kind whatsoever, especially if they assume the Nature of *Causæ Continentes*, and either keep up or feed the Distemper, as in Chronical and Periodick Disorders, which could never last and renew their efforts so long, if their immediate cause were not rais'd up by the gradual accession of fresh Fewel, that multiplies either from an internal or external Cause. This holds in all fermentative Distempers; for even inanimate Bodies under Fermentation are subject to these measures, and oftentimes stand in need of an external Mover, such as Heat, Motion, *&c.* to excite the Fermentation: In fine, considering that the three Causes I mention'd but now, are equally concern'd either in producing or incouraging the Disease, I shall here shew how Indications of Cure are to be taken from each of 'em.

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3.

The Procatarctick cause is more obvious to Sense than any of the rest, and I positively affirm, that unless a particular regard be had to this Cause, the Cure will never go well on: For by those external Things that give occasion to the Disease, we gain a more compendious and certain way to the knowledge of the internal Nature, provided those exernal Things are duly examin'd. Suppose one should undertake the Cure of a Fever proceeding from the scorching of the Sun, or some such external Cause, and going upon the modern Hypothesis, that not only Fevers but all diseases proceed from an acid, should prescribe volatile Alcali's in a liberal quantity, with intent to break the febrile Acid, and throw it out by Sweat: Suppose, I say, he should insist on this Method, would not he be monstrously mistaken; since the raging motion of the Blood, occasion'd by the scorching or some such heating Cause, ought rather to be appeas'd by gentle Med'cines, than spurr'd by furious Alcali's. When therefore the immediate and nearest Cause puts on a different Face, according to the diversity of Procatarctick and Antecedent Causes; we ought always to have regard to these in taking the Indications of Cure. For a Fever arising from unseasonable Cold, must be treated after a different manner from a Fever occasion'd by Drinking, Venery, standing in the Sun, emotions of the Mind, and other Causes.

4.

This fills me with amazement, in seeing the Physicians of this Age aim only, and that with triumph in a manner, at the assigning of the first

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and immediate causes of Diseases, which lie at the greatest distance from our reach; and overlook the occasional Causes that are obvious to our external Senses. Let the external Cause of a Disease be what it will, they treat it the same way, as if it proceeded from another; and regardless of the ancient Discipline subvert the Method and Priority of Causes with a blind inconsiderat forwardness. Who can tell the Nature and Condition of the minutest Texture of the Blood in a Fever, a Pleurisy, an Apoplexy, a Delirium, and other Diseases? And who can decipher the first and immediate cause that sets them all at work? For in the production of Diseases, whether Acute or Chronical, there's some occult Cause at work, that humane Speculation can't fathom, and is sought after in vain, unless we can smell it out from the *Juvantia* and *Lædentia*. 'Tis the ignorance of this immediate Cause, that gives rise to so many idle Conjectures: Some taking it to be the Bile, others an Acid, others a pituitous Humour, join'd to the four Humours; others a subtile and ethereal Matter, *&c.* Upon which Conjectures they raise false Indications of Cure, and with a Magisterial Air cut the Sinews of further Enquiries.

5.

Not that I mean to vindicate the Empiricks, who are all upon evident and sensible Causes, and contemn the latent and internal Causes; or to join in with *Herophilus*, who attributes no cause at all to Diseases. I only lay this stress upon the evident and obvious Causes, upon the consideration, that our art is Conjectural, and plac'd in the midst of Darkness; so that we

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are oblig'd to acquiesce sometimes in such things as we feel with our Senses, and discover by the Dissection of dead Corps; for these being plain and manifest will seldom impose upon us, or at least not to the same degree with the internal and remote Causes. All this is confirm'd by Dr. *Sydenham*, who in the Preface to his Works, speaks to this purpose. *As 'tis impossible for a Physician to trace those Causes which have no correspondence with the Senses, so 'tis not necessary: for 'tis sufficient if he knows whence the Evil and its Symptoms arise, so as to make an accurate distinction between one Disease and another.* I would therefore advise all Practitioners to interrogate their Patients particularly about the occasional Cause that set the internal Cause at work: for as the knowledge of that renders the Cure easie, so the Patients are wont to conceal it either thro' carelessness or bashfulness. Is not that Physician a Mad-man that would offer to cure a Fever occasion'd by excess of Venery, with the same method of Purging, Bleeding, *&c.* that's commonly calculated for such as take rise from other Causes? I was lately call'd to 'tend a Noble-man that was desperately ill of the *Sciatica*, after using all sorts of Remedies to no purpose; and having smelt by chance, that about twenty Years before he had *had* Venereal Bubo's upon him, I thereupon suspected the *Sciatica* to be Venereal, and cur'd him in a few Days with a Decoction of *Sarsaparilla*, *Crude Antimony*, &c.

VI.

The Cause call'd by the Grecians προηγούμενις, and by the Latins, the disposing Cause, or the Disposition of the solid and fluid Parts of the Body to receive the Disease, is not a Cause, properly so speaking, because it does not act of it self: But in regard the procatarctick or occasional Causes cannot exert their Force, unless the Body be disposed to receive their Impression, some Authors have listed this Disposition into the Number of Causes, and thought it a proper Standard, both for giving and regulating Indications of Cure. Of many that lie with a foul Woman, only some are infected. A great many 'tend People that are ill of the Plague, and yet never have it themselves. Many joyn in the same Excess of Intemperance, that are not equally punished for the Misdemeanour. Several Persons lie equally under the Influence of one common Cause, but all of them do not fall sick. This gives us to know, that sometimes the occasional Cause would not exert its Force, unless the Solids and Fluids of the Body were predisposed to favour it, and so call up the immediate Cause. This Disposition is sometimes obvious to the Senses, and sometimes occult. Of the former Sort are the Scorbutick, as well as the Pocky, Hypochondriack, Epileptick, and such other Dispositions as are manifested to us by antecedent Diseases: And these we ought not to over-look in the Case of new Diseases: for the Indications of Cure ought

to be levelled both at the new Disorder, and the old Disposition of the Body. The latent occult Dispositions are those peculiar to every Man, which the Ancients called *Temperament*, and distinguished into hot, cold, moist, and dry; and these again into simple and compound. Now these Temperaments or Dispositions taken in a large Sense, may contribute somewhat in producing a Disease; but at the same time, it is a difficult and idle pretence to imitate the *Pseudo-Galenists* of our Times, in reducing all to such Qualities, and deriving from thence the immediate Cause of Diseases.

VII.

In Effect, these internal Properties that dispose the Blood to receive various morbifick Impressions, are infinitely different one from another: for one Constitution disposes the Blood to Coagulation; another to Dissolution, Inflammability, *&c.* one disposes it for a Malignant Fever, another for an *Ephemera*, and so on. Now human Speculation can scarce reach the genuine Nature of these Dispositions, and the true Structure of the *Minima* of which they consist. But from the former way of Living, and the Use of the six not natural Things, we may guess at some general Qualities; as whether the Dispositions are terrestrious, sharp, acid, moist, inflammable, gross, apt for Coagulation, *&c.* An intemperate Way of Living, unwonted Sitting up a Nights, unusual Exercise, Anger, and such like impetuous Occasions, give us

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to know that the Blood is very active, sharp, and inflammable; and that the Diseases which appear in that Juncture, are either produced or incouraged by this Disposition: So that the Indications calculated for the Cure of the Disease, ought likewise to have a regard to this previous Disposition. The Ancients gave you the Signs of the first and second Qualities over-abounding in the Body and disposing to Diseases; and these they called *Intemperies*, some of which they made be accompanied with Matter, others without it, *&c.*

VIII.

The Weight and Duration of Diseases is proportional to the Greatness and Continuance of this Disposition: As it is manifest from the Experience of those who give an indiscreet Loose to Intemperance, Venery, unwonted Watchings, unseasonable Labour, Passions of the Mind, and such other Inconveniencies; for these Men are longer and more dangerously ill, than others who used to live soberly and regularly. Having therefore found out the occasional Cause, by conversing with the Patient, we may make some Conjectures of the predominant Quality in the morbifick Disposition of the Solids and Fluids; as whether 'tis sharp, acid, viscid, inflammable, coagulating, *&c.* And in Order to set all this in a clear Light, we must likewise be acquainted with the natural Constitution of the Patient; I mean, we must know whether it is hot or cold, moist or dry,

(to use the ancient Names, without wrangling upon Words) or whether the Blood abounds (in the Language of the Moderns) with moist, terrestrious, fiery, or fixed, unactive Particles, which are all correspondent to the Qualities of the Ancients. Under the Head of the Patient's Constitution, we must likewise consider the solid Parts, whether they are flaggy or bent, liable to Convulsions or Relaxations, near the Impulse of the Heart or at a distance from it, watered with much or little Blood, plentifully stocked with fleshy or nervous Fibres, *&c.* For all these Circumstances are of use to unfold the inner Dispositions of the Parts; and unless they be duly weighed, a great many Inconveniencies will arise in the Use of Remedies, upon the Account that these ought to be variously tempered and blended, in pursuance of the various Temperature of the Fluids and Solids, and the Diversity of antecedent Causes, *&c.*

SECT. III.

Of the Immediate Cause of Diseases, and the chief Heads that serve to discover it.

I.

HAving thus dispatch'd the occasional and dispositive Causes, we come next to the *Causa Proxima*, or the immediate Cause, the Presence or Absence of which gives a necessary Inference of the Presence or Absence of the Disease. 'Tis this Cause that raises every day such scandalous and fatal Divisions

ons among Physicians. But considering that our Thoughts cannot readily fathom what is a doing within us, we are obliged to take Help from such Methods as we are more sure of. The Men of Learning, having labour'd long in vain in seeking out the immediate Cause, and adjusted the Nature of the foreign Ferment that immediately produces every Disease, came at last to this Conclusion, That if so be we discover the Indications of Cure, and the Remedies proper for the Disease, 'tis no great matter whether we know the immediate Cause or not. This Assertion is justified by the Empiricks, who contemning the learned Speculations of Physicians, with Reference to the immediate Causes of Diseases, are oftentimes as happy in curing Diseases with their *Arcanum's*, as the rational Sect are with their elaborate Methods and Speculations. And the same thing appears from Epidemick Diseases, produced by the faulty Constitution of the Air; the immediate Ferment of which cannot be traced or adjusted by us, though at the same time we are not ignorant of the Method that extirpates the Diseases thus produced by the unknown Cause; for, upon a sedulous and prudent Observation of what affords Relief and what is prejudicial, we readily light upon such Methods. In fine, What candid Physician can deny, That he is almost intirely unacquainted with the internal or immediate Cause of Diseases, and yet undertakes their Cure; nay, and happily compasses the End, by Vertue of a Method obtain'd by long Use and Experience.

II.

But after all, we can point to several Ways of being let into the Knowledg of the immediate Cause of every Disease. In the first place we may come at it by knowing the occasional and disposing Causes, of which above. In the second Place, there are several Diseases, the immediate Causes of which are easily brought to light; such Causes are Water in a Dropsie, purulent Matter in an *Empyema*, and the Stone in Nephritick Cases; the Removal of which, sometimes argues the Removal of the Disease: Though indeed, it must be confessed, that oftentimes this does not hold, by Reason that a remoter Cause feeds the Hydropical Water, the Empyematical *Sanies*, and the Nephritick Stone, and is inaccessible to our Speculations: In which Case, we must have Recourse to the following Artifices. Thirdly, we may trace the immediate Cause by the *Excreta* and *Retenta*, the Disorders of the Tongue, Eyes, Face, and other Parts that are obvious to our Eyes. In the fourth Place, the *Juvantia* and *Lædentia*, and the Method of Cure appropriated to any Disease, may give us some Light. A Fifth, Help will be an Investigation of the Nature of what proves serviceable or disserviceable: for if we once discover that, either our Senses or our Reason will readily conduct us to the Knowledg of the minutest constituent Parts of the immediate Cause. The sixth is the Mutation of one Disease into another, of the like, or of a quite different Form. The

seventh

seventh is the Disorder of the principal Functions, *viz.* the Pulse, Respiration, Strength, *&c.* And the eighth is a due Consideration of the Nature, Force, *&c.* of the Symptoms that accompany the Disease.

III.

To begin with the *Excreta* and *Retenta*: The chief Particulars of this Class, are the Ordure, Urine, Spitting, Sweat, Vomiting, Blood drawn forth by opening a Vein, the Colour of the Skin, Nails, Eyes, *&c.* We are sufficiently informed by the Chymical *Analysis*, what Principles the Urine consists of; and particularly, that in a natural State, an Armoniack sort of Salt bears the Ascendant, and gives both Colour and Weight to the Urine: But in a sickly State, the Nature and Mixture of the Salts is (perhaps) as various as the Diseases themselves. As the Urine therefore is more or less high colour'd, it argues a Plenty or Scarcity of such Salts which produce Diseases. Those who fall into a fatal or mortal Suppression of Urine, are seized with a Stupidity, a Trembling, and an universal Shivering; and at last, with a Fever, Apoplexy, and the other Disorders of the Nerves: By all which we are taught what Diseases the Salts of Urine, abounding in the Blood, are apt to produce. In acute Diseases, pale and thin Urine prognosticates a Frenzy and the Diseases of the Head; so that we may reach the Knowledg of the first and immediate Cause of such Diseases, if we are but acquainted with the ge-

nuine Nature of the Principles of which the Urine consists; and so may fix upon the Cure, by learning out of the Physicks what things are contrary to such and such Principles. Further, the Smell and Colour of the Excrements or Ordure, will give us to know the Nature of the immediate, or rather the antecedent Cause, from whence the immediate Cause is derived. If the Excrements be too yellow, or rather green, black, *&c.* they speak a Redundancy of acid, sharp, and vitriolick Salts; if they are white, copious, or liquid, they speak either the Inactivity of the Ferment of the first Passages, or an undue Paucity of saline and sulphureous Parts, these being the Parts that give Smell and Colour. Above all, the Tongue affords the closest Signs of the State of the Blood: An acid Tast upon the Tongue, betrays the acid Constitution of the Blood, and that of the other Humors deriv'd from thence; a salt Taste speaks the Saltness of the Blood; a bitter Taste gives us to know its abounding with bitter Particles; a viscid, mucous, insipid Taste, speaks Plenty of the like Particles: If the Tongue is moist, so is the Constitution of the Blood; if dry, than the Blood is of a dry inflammatory Nature. In fine, take this for a Secret, That the most certain Signs of the State of the Blood are taken from the Tongue: for that Organ being a Collection of an infinite Number of little Glands and nervous *Papillæ*, through which the morbifick redundant Parts are immediately convey'd without suffering any Alteration by the Way, as they do in other Emunctories: We ought

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therefore, in the Knowledge of Diseases, to lay a great Stress upon the Affections and Alterations of the Tongue; especially considering that the other Signs do frequently deceive us, whereas this seldom or never does. Take care then, that you never visit a Patient without minding his Tongue, let the Disease be what it will; especially if you suspect internal Inflammation; for these you may certainly learn from the Tongue, which dries upon the least inflammatory Disposition, and grows dryer and dryer as the Inflammation rises.

IV.

Sweat and Vomiting lye under the same Rules with the Urine and Ordure; for the Colour, Smell, Quantity, *&c.* of the Humor thus evacuated, discovers the respective Nature of the immediate or antecedent Cause, as above. The Blood drawn by opening a Vein, will make the same Discovery: if it be too bright a Red, it speaks Plenty of volatile and inflammable Parts; if blackish, then terrestrious and fix'd Parts abound. In all Inflammations of internal Parts, especially an acute Pleurisie, the Blood drawn has a white Gelly like Crust upon its Surface; which indeed is nothing else but the Nutritive Chylous Part of the Blood, disengaged from the Body of the whole Mass, and gathered into a white Crust, by Vertue of the excessive Heat of the Blood, and its being over-stock'd with volatile Particles. So that in the Cure of such Diseases, the over-bear-

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ing Fermentation ought to be restrained by repeated Bleeding, and by *Anodyno-Alcaline* Diluting Med'cines; that by this Means, the ruddy and Nutritive Particles may be amicably link'd together, and a Stop put to such inflammable Dissolutions. The Consistence of the Blood shews likewise what Principle 'tis over-stock'd with. The Blood of Hectick Persons is of a bright red Colour, and does not easily congeal; and at the same time they are lean, watchful, peevish, *&c.* from whence we learn that there is a Redundancy of somewhat that is too sharp in their Fluids. *Vepferus Exer. de Apoplex. Fol.* 429. acquaints us, That in dissecting the Corps of some that dy'd of continual, and some of malignant Fevers, he found the Blood fluid and not congealable. *Simon Pauli de Febr. malign. sect.* 2. observes that in several dangerous Cases, he found the Blood drawn out of a Vein to be very red, and almost of the Colour of the Flower of the Indian *Throatwort*, with little Serum. The same thing is observed by several Moderns in pestilential Cases. We conclude therefore that the Colour, Consistence, and other Qualities of the Blood drawn by opening a Vein, may point to the latent Constitution of the immediate Cause.

V.

Since I am speaking of the Nature of the Blood, I must observe by the Bye, that no Physician can cure a Fever happily, without he inform himself of the State of the febrile Blood, before he exhibites any Remedies;

as

as whether 'tis too rapid, thin, inflammable, *&c.* or on the other hand, apt to congeal, thick, malignant, *&c.* For in such different States of the Blood, the Indications of Cure must be diversify'd accordingly. When the Blood is apt to dissolve and boil over with a furious Rage, it must be treated otherwise than when it tends to Coagulation, Roapyness and Malignity. We must not, in the very Beginning of Fevers, commence the Cure of all promiscuously by such Med'cines as cleanse the first Passages, (as they call it) and purifie the Blood it self; for that untimely Use of Purgatives either redoubles the Fever, or renders it malignant. There is no certainer Sign of an imminent Hysterick Fit, than the Colour of the Urine; for it turns, a little before the Paroxysm, from a citrine to a watery thin Colour. We observe further, that in violent Commotions of the Mind, the Urine turns from a high red, to a watery pale Colour; and does not retrieve its natural Colour, till the Passion is quite gon off. This watery Colour of the Urine, is a constant Fore-runner of a convulsive Paroxysm; and in Spasmodic Cases the Urine is almost always thin, clear, and plentiful. From these Observations we may draw this Inference, That the above-mentioned Diseases are either produced or fed by the Salts of the Urine. The Colour of the Skin is likewise to be regarded: If it be white, pale, yellow, blackish, brown, or the like, it denotes the Abundance of such Parts in the *Viscera*, or the Blood.

VI.

Next to the *Excreta* and *Retenta*, are the *Juvantia* and *Lædentia*, or the Method of Cure appropriated to every Disease; by which we may trace the Nature of the immediate, or the antecedent Cause. To instance in Intermitting Fevers: They rage chiefly in the Spring or the Autumn, at a time when Crudities are thrown in upon the Blood, either thro' the Intemperance of the past Summer, in Eating Fruit and Drinking Water, or thro' the nipping Cold and unusual Wetness of the preceding Winter. Bleeding and Purgation, in the Beginning of these Feavers, makes 'em worse: Their concomitant Symptoms are Cold, Weariness, Shivering, a gentle Heat, a slimy Tongue, and immoderate Thirst: the beneficial Medicines are those of a bitter, sharp, and volatile Lixivo-alcaline Nature. The Med'cines that inflame the Disease are refrigerating Syrups, too moist a Diet, slimy and inactive Food, *&c.* The Fits are exasperated by such Food as is not easily digested, and by over-Feeding; and on the other Hand, Abstinence makes 'em gentler. If you commence the Cure of these Fevers with the *Febrifuga*, you will throw your Patient into many Disorders. Such is the Series of the *Juvantia* and *Lædentia* in intermitting Fevers: from whence 'tis manifest that their immediate Cause is somewhat of a crude, slimy, viscous, and congealable Nature. The principal Source of the Gout and the Stone is Wine, Venery and Intemperance; and the Antidote is the Drinking of Water,

Water, Milk, and a sober Way of Living; but above all, a due Regard to the Stomach: From whence we argue, That the immediate Cause of the Gout is something of a sharp, terrestrious, and acute Nature; that being readily fed by Wine, Venery, and Intemperance, and there being nothing more effectual in breaking the Shock of sharp, terrestrious, and acute Particles, than Milk and Water, which consist of soft and flexible Parts, and such as easily make their Way. Now, this Scrutiny ought to be minded in all Diseases, especially such as are incouraged and kept up by some occult Causes, or the Influence of the Air: For by exhibiting some Remedies in the Beginning, which may be tried without Danger, and observing whether they do Good or Harm, we may quickly inform our selves of the Nature of the immediate Cause, and its Tendency to depart through this or that Passage; and that chiefly in occult Diseases, or such as are of a recent Epidemick Nature; in which we cann't avoid the suffering of one or two of our Patients to run the Risque of the Disease, till such time as a Judgment can be made upon the *Juvantia* and *Lædentia*, so as to form a proper Method of Cure.

VII.

In the fifth Place, a due Survey of the Nature of what benfits or prejudices the Patient, will lead us to the Knowledge of the immediate Cause. In Hectick Cases, for Instance, all the World holds Milk to be the chief Remedy: Now the Principles of which Milk is compos'd,

compos'd, are Cheese, Butter, and Whey: And the Chese and Butter consist of soft, mild, alcalino-sulphureous Particles, &c. So that the Hectick Morbifick Particles in the Blood, must be sharp, rigid, pointed, &c. In Intermitting Fevers great Benefit is obtained by the Use of such Medcines as are bitter, sharp, Lixivo-Alcaline, &c. Now the Particles of which these consist, are stiff, acute, sulphureous, &c. and consequently the morbifick Particles of such Fevers, must be the Product of viscid, gross, and unactive Matter. In ardent Fevers we find Benefit in the Emulsions of the Seeds, large Potions, gentle Acids, and Anodyne Remedies; the Particles of which are mild, gentle, and watery; so that the Particles of ardent Fevers must consist of a volatile, sharp, acid, and impetuous Substance. In several lingring Fevers, and some chronical Distempers, we receive great Benefit from the austere bitter Med'cines that approach to the Nature of Astringents; such as the Peruvian or Jesuits Bark, Tormentil, Cinquefoyl Roots, Crude Allum, Chalybeats, Ash Bark, Vitriolick Chalybeat Med'cines, and such other things as operate by Astringency. From these Observations we make a just Inference, That such Fevers are owing to the drooping and flaggy Spring of the fluid and solid Parts, and not to the pretended Obstruction of the Viscera: For accordingly we find that your styptick, bitterish, and somewhat spirituous Med'cines, which corroborate and compact the solid and fluid Parts, inable them to make a powerful Resistence to the coming Ferment that tends to raise a febrile

Heat

Heat in the Blood, and dextrously throw it out by the repeated Circulations of the thus corroborated Sieves of the Viscera.

VIII.

If Sweating be necessary, and does not appear upon the Administration of proper Remedies, let Blood, and 'twill break immediately; especially if the Stop was owing to an over-bearing Croud of Humors, and a stiffling as 'twere in the Vessels. I know an Hypochondriack Person that's frequently seiz'd with a dismal *Asthma*, that e'en almost choaks him, and attacks him all on a suddain with a Distention of the Belly, and a murmuring Wind rolling up and down: And whenever I am called to him, I order Bleeding immediately; which is scarce sooner over than a Cessation ensues of the *Asthma*, the Distention of the Belly, and the Fear of imminent Suffocation. Repeated Experience has taught me, that the most obstinate convulsive Colicks arising from the Fury (as 'twere) of the Spirits, are speedily and succesfully cured by Bleeding, and Anodyne Remedies extreamly diluted: as also that sanguine Apoplexies (that is, such as proceed from the Stagnation of the Blood about the Vessels of the Head, and are accompany'd with a Redness of the Face, a Turgency of the Veins, *&c.*) yield to no Remedy so readily as to the earliest Bleeding. Those who promiscuously fall upon Apoplexies, whether Sanguine or Pituitous, with Purges, Vomits, and spirituous Remedies, without premising Venesection in the sanguine-

ous

ous Kind, ought to be reckon'd Madmen. I was once called to a Woman of 60 Years of Age, that had a Palsie of one Side, besides a Palsie of the Tongue, and cur'd her in three Days with the following Method: After drawing ten Ounces of Blood out of the Arm of the Paralytick Side, I prescrib'd the following Mixture: Take Water of Peony Flowers and *Cardüus Benedictus*, of each three Ounces; Spirit of Sal Armoniack, twelve Drops; Powder of human Skull and Diaphoretick Antimony, of each a Scruple; mix and make a Potion to be taken off immediately: Let the whole Spine of the Back, and the paralytick Half of the Body be anointed hot with Oil of Foxes mix'd with the Spirit of Wine: Let her hold in her Mouth a Gargarism of the Decoction of Mistletoe of the Oak and Oxymel of Squills: By the Use of this *Recipe*, I say, she recovered in three Days Time. All these Observations are Evidence that the above-mention'd Diseases are owing to the crowding and penning up of the Humors or Spirits in any Part; which yields to no Remedy so readily as to Bleeding, either in the Part affected or near it; for of all the wonderful Effects of Bleeding this is the chief, that it lets forward the Blood that stagnates, or has a Tendency that way, opens its Consistency, if it be too compact, and restores it to its native Fluidity: For when the vital Fire has more Room allowed it, 'tis rather thereby blown up than extinguished; especially if the Impulse of the Heart, which causes and keeps up the circular Motion of the Blood, be continual and strong.

IX.

IX.

We came now to the sixth Article, namely, the Conversion of one Disease into another of the like, or of a quite different Form. That this may afford some Light touching the immediate Cause, is plain from *Ballonius Consil.* 13. where he speakes to this purpose: *Hippocrates order'd the mutual Succession of Diseases to be carefully minded, upon the Account that many Symptoms happen in long tedious Diseases; which by Vertue of a fallacious Similitude, impose upon even good and learned Physicians; and new Diseases, like an upstart Offspring, follow upon, and spring out of others.* An Arthritick Illness is easily transformed into the Colic; so that he who knows the immediate Cause of the former, must needs know that of the latter. All Persons subject to the Stone are apt to have the Jaundice, and *e contra*; if therefore the immediate Cause of the one is known, the other cannot be lost. The Striking in or irregular Cure of the Scab or Itch, is followed by many unlucky Diseases; particularly, a Spitting of Blood, an Apoplexy, a Dropsie, lingring Fevers, *&c.* *Hippocrates* tells you in *Epidem.* That an *Athenian* coming to *Mile* to be cured of an ugly Itch or Scab by the Use of the hot Baths, was cured accordingly; but fell soon after into a Dropsie, of which he dyed. *Sennertus* informs us that this Case is frequently followed by a Fever and Blindness; and particularly in *Prax. Par.* 3. *Sect.* 2. *cap.* 44. That a Boy having struck in the Scab with Liniments, was seized with Blindness and a Fever, of which he died, upon the Ac-

ceſſion of an Epileptick Fit. The Itch is a good Sign, when it happens in a Quartan Fever; for ſoon after its Appearance the Quartan will go off, and the Itch it ſelf will diſappear without the Uſe of any Remedies; Witneſs, repeated Experience. He therefore who finds out the immediate Cauſe of the antecedent Diſeaſe, can't be ignorant of the Cauſe of the ſubſequent. For the Purpoſe; upon the Conſideration of the Itching, the Foulneſs of the Skin, the way of Living, and the Method of Cure, we conclude that the firſt or the immediate Cauſe of the Scab or Itch, is a ſharp briny Humor, lodged in a viſcid or thin Juice; and it is probable the Diſeaſes that ſpring from the ſtriking in of the Itch, are owing to the ſame Cauſe. You may read many Inſtances of the mutual Tranſmutation of Diſeaſes, in ſeveral Phyſical Authors; to which I refer the Reader.

X.

The ſeventh Introduction to the Knowledge of the immediate or antecedent Cauſe of Diſeaſes, is the Injury that the Parts and principal Functions ſuſtain. The Palpitation of the Heart proceeds, for the moſt part, from ſome Impediment about the Heart; for in diſſecting the Corps of ſuch as die of that Illneſs, we find in the Ventricles of the Heart, or the neighbouring Parts, *Polypus's*, *Aneuriſma's*, Oſſifications, great Clots of Blood, tartareous Matter, Worms, and the like. And particularly about five Years ago, I obſerved in the Body of a Man of 60 Years of Age, that died of the Palpitation of the Heart, a huge

Aneuriſma

Aneurisma in the ascending Aorta, just by its Insertion in the Heart; and in the Cavity of that *Aneurisma*, a Polypus as big as a Goose Egg. Nor are such Impediments only found in the Palpitation of the Heart, but likewise in other Disorders of the Lungs and the Heart; such as an *Asthma*, an Intermission of the Pulse, and the like. And here I must take notice by the Bye, that repeated Dissection has taught me, That if these Disorders of the Heart proceed from an Organical Cause, namely a Polypus, an Aneurisma, *&c.* they affect the Patient not by Intervals, but continually; the Face is of a pale, or some other sickly Colour; and the Patient is molested with other grievous Symptoms, that are near ally'd to a Dropsy. But if they are produced by the Acrimony and Irritation of a fluid Matter, they affect the Patient only by Intervals; and particularly when the Wind is southerly, and the Mind disturbed with passionate Commotions; his Countenance retains its natural Colour, and the other Symptoms are neither so grievous nor continual: So that wherever the first and repeated Symptoms appear, there must we fix the Seat of the Disease. The human Body is a Bundle of Fibres variously interwoven and corresponding to one another, which are bended this Way or 'tother by the Fluid that moves within, as by a Spring: And from thence proceeds that great Sympathy and united Consent of the Parts. In mentioning this admirable Consent and Sympathy of the Parts, I do not countenance the ancient Opinion of Vapours rising, which the Moderns have sufficiently defeated; for I derive all

Consent in the Body, either from the Vicinity of the Parts, as that of the Midriff and Pleura, the Bladder and the *Intestinum Rectum*; or from a Communication of Vessels, such as that of the Veins, Arteries, Nerves, and other Vessels among themselves; or that of adjacent Parts, the Liver, for Instance, and the Intestines, by Virtue of the *Ductus Cholidochus*; or else from a Similitude and Continuity of Substance, such as that general and truly wonderful Similitude and Continuity of all the membranous Parts of the Body; by Vertue of which, several things happen in a living Body that are almost incredible, and beyond the Reach of our Reason; insomuch that Nature refusing to disclose its Ways, constrains us to a blind Submission. Granting this infallible mutual Consent of the Parts, I am truly of the Opinion, that in tracing the immediate Cause of Diseases, the Marks taken from such Parts as lye at some mutual distance, cannot deceive us under the Colour of Truth; but will, in proportion to the Sedulity of our Enquiry, conduct us sooner or later, with greater or lesser Facility, to the Knowledge of what's a doing in the remoter and occult Confines of Nature; especially if the morbifick Cause sets up its Standard in those Parts appointed for some publick Function, such as the Heart, the Lungs, the Brain with the nervous System, *&c.* which do always keep to the same Order and kind of Symptoms, when they are in Disorder. This happens chiefly in malignant Fevers, the Source of which uses to reside sometimes in the animal, sometimes in the vital, and sometimes in the other Parts;

which

which Practitioners discover, by considering the Disorder of the Operations peculiar to such Parts. So much for finding the Seat of the immediate Cause; as for the Investigation of the Nature of it, 'tis accounted for in the foregoing Theses.

XI.

The Eighth Topick from whence we derive the Knowledge of the immediate Cause, is the Symptoms that either accompany or usher in the Disease; their Nature, Force, and way of Invasion, as well as their Remission or Heighthning upon the Use of Remedies. Those who are seiz'd with a pituitous Apoplexy, are pale in the Face, and drown'd in a deep Sleep; their Pulse is low, and their Disease yields to Vomits and Purges, but gains Force from Bleeding. Upon these Considerations we conclude, that such Apoplexies owe their Being to somewhat that's viscid, and gross, and of small Force. On the contrary, in a sanguineous Apoplexy, the Face is flush'd, the Blood Vessels of the Head are extream turgid, their Sleep is not profound, nor their Pulse so low: Bleeding gives them Ease, and Vomits and the other impetuous Remedies inflame the Distemper. From this Series of Symptoms we may readily believe, That the Cause of such Apoplexies depends upon the Interrupting of the Course of the Blood, Spirits, *&c.* in the Brain, or the adjacent Vessels; where being stopp'd, they make an impetuous Shock. A Bilious Colick is oftentimes attended with a Cessation of Speech, and a hoarse Voice, which some-

sometimes continues during the whole Period of the Disease: And this same Hoarseness is observed in Bilious Fevers; whence we make a just Inference, That a Hoarseness and Cessation of Speech, in acute or such other Diseases, argues the Dependance of their immediate Cause upon the Bile, or upon sharp, volatile, and sulphureous Parts. This Speechlessness is no uncommon Forerunner of Epileptick Convulsions in a Colick. Sometimes we meet with Pains that attack the Patient at set times, like Intermitting Fevers; in which Cases you may rest assured that the immediate Cause is not bred in the Part affected, but comes of a foreign Original: And I have sometimes observed, that when no other Remedy would do, a gentle Purgative exhibited about three or four Hours before the Invasion of the Pain, has dispelled it in a short time, especially when the Scene is laid in the lower Belly; nay, repeated Purgation is an effectual Remedy for any other Periodick Pains.

XII.

The latent Imposthumes of the Liver, that give way to no Remedies, discover themselves by unsufferable Pains in the Leg, or the Calf of the Leg. This Assertion is attested by several Authors, and particularly by *Hollerius, Com. 2. ad Lib. 2. Coac. Hip. Fol.* 348. His Words are to this purpose; *I was surprised twice or thrice with unsufferable Pains in the Leg, or the Calf of the Leg, that neither Fomentation, nor Liniment, nor Cataplasm could remove: When the Patients dyed I laid open their Legs, and*

there

there issued out a whitish pale and light Pus, *that lay upon the Interstices of the Muscles, and was kept in by the greater Vein; and in tracing the Place from whence this purulent Matter came, when I came to cut up the Abdomen, I found the Liver ulcerated and putrified. Those who are thus affected must needs dye of it. Jacotius* made the same Observation in *Coac. Hip.* as well as *Bauhinus* in his *Observ.* and *Tab. Anatom.* So much for the way of enquiring after the immediate Cause of Diseases; upon which Subject I have touched as far as my Weakness would allow, upon the noblest and most useful Heads, leaving the rest, for Brevity's sake, either to my own future Adventures, or to the Diligence of Posterity.

CHAP. X.

Of the right Way to form Indications.

SECT. I.

AFter laying down a History of Diseases in a Description of the *Phænomena* and Causes, our Historian must with equal Diligence apply himself to the Method of Cure, or the constant Indication taken from the repeated History of Diseases: And, to confess the Truth, the first Foundation of Practice is the Indications, upon the Detection of which, 'tis an easie matter to cull Remedies out of the Store-House of Nature; for the sorryest Apothecary's Boy knows that Rhubard purges, Antimony moves to Sweat, Hoglice provoke to Urine, *&c.* But when Purgation is seasonable, when 'twill be proper to

raise a Sweat, and under what Cautions; that's a Question of another Kidney, the due Solution of which requires an aged Course of Use and Experience: For as *Hippocrates*, *Lib. de Arte*, says well, Whatever is beneficial, proves such by Vertue of the right Use and Application. This therefore shews the Vanity of such Authors, as crowd their Books with Forms of *Recipe's*, without taking the least notice of Indications; or if they do, 'tis only some general Advance, and the Product not of fertile Nature, but of giddy Speculation.

II.

If any thing in the Practice of Physick wants to be corrected more than another, 'tis the common Indications; which being raised upon false Hypotheses, afford us nothing but the idle Whim of Speculation. The *Galenists* deriving the Cause of all Diseases from their four Humors, are always harping upon the same Story, when they come to the Cure. For when they are called to a Patient, their first endeavour is to find out the peccant Humor of the four, which at last they pitch upon, after many Questions and Arguments. The peccant Humor being thus determined, all their wise Views center in this, to prepare the peccant Humor for Evacuation, and so to carry it off accordingly; which they do not once or twice, but again and again in the same Disease; and so run the Indications of all Diseases in a Circle (as 'twere.) To illustrate the Matter with an Example; They lay down an infallible Hypothesis

theſis, that Tertian Fevers take their Riſe from the Bile; in purſuance of which, all their Indications are levelled at the Evacuation of the peccant Bile by repeated Purgation: And when all comes to all, we obſerve though a great deal of bilious Matter is evacuated, the Fever increaſes, and inſtead of a ſimple one becomes double; nay, the double Fever turns Chronical, or at laſt Mortal. After reading the Obſervations made by the *Galeniſts*, about two Centuries of Years ago, I cannot expreſs how ſenſibly I was affected with their ſupine Negligence, when I ſaw ſimple Tertians turned into annual Fevers, by the repeated Uſe of Preparatives and Purgatives, and abandoned by the Phyſicians as incurable. Nay, the ſame was the Fate of the Quartan Fevers, and other Chronical Diſeaſes. However there aro two things that ſufficiently defeat the pretended Indication of Evacuating the Bile in Tertian Fevers. The firſt is the late Diſcovery of the *Peruvian* Bark, and other artificial *Febri-Fuga*; which if ſeaſonably and prudently exhibited, do happily diſpel all intermitting Fevers from any Cauſe whatſoever, without any Preparation or Evacuation of the Humors. The ſecond is daily Experience, which proves, that intermitting Fevers are either duplicated or exaſperated with grievous Symptoms, by the exhibiting of Purgatives in the Beginning; and that upon the frequent Repetition of theſe Purgatives, they become Chronical and Fatal. This Narrative of Tertian Fevers may ſerve as a Pattern for the Indications of other Diſeaſes, and a ſufficient Inſtance of the groſs Prejudices occaſioned by a falſe Method

of

of taking the Indications of Diseases. Now a-days we cure many Diseases with the slightest Remedies, or by a mere Abstinence from Remedies, without any Regard to the Influence of the four Humors in producing them.

III.

The modern Practitioners endeavouring to avoid the Rocks of the *Galenists*, have split upon greater themselves; for notwithstanding they certainly knew, from the Example of the *Galenists*, that Physick divorced from Observation, may perhaps be polished and licked into Form, but can never grow or be improved: Yet, to humor the Genius of this Age, they deduced the Causes of all Diseases from the giddy Notions of *Alcali* and *Acid*, and put their Indications of Cure upon the same Foot; contenting themselves with a bare universal or general Proposition, as being intirely ignorant what Acid produces any Disease, or what Alcali removes it. The Groundlesness of all their Opinions is manifest from daily Experience, which teaches us that our Constitutions may be injured by a thousand things, and that every Disease depends upon a præternatural and peculiar Specification of the Humors.So far are the Causes of Diseases from being confined within the narrow Verge of four Humors, or that of an Alcali or an Acid. For there lies a just Charge against the bitter and sharp Particles, the relaxating and contracting, (to use the Language of the methodical Doctors) or the congealing aud dissolving, the harsh, the salt,

and

and a thousand other kinds of Qualities. Nay further, some Diseases have no other Cause but the Alteration of the due and natural Texture or Configuration of the constituent Parts of any Humor, produced either by an external Cause, or the internal Agitation of the strugling Parts of that fluid or of the solid; by Vertue of which they acquire a new Motion, Figure and Position, and so become the Cause of Diseases. And whatever is capable to controul that præternatural Texture, and retrieve the primitive Spring of the Humors, whether it is hot or cold, acid or alcali, or possessed of opposite Virtues, or administred outwardly or inwardly, you may still be assured that it will effectually remove such Disorders. Thus we find that in the Way of Practice, one and the same Disease is equally cured by contrary Med'cines and Methods, or by hot Remedies as well as cold. Thus according to *Henricus Heer*, the Spaw-Waters, which are well known to remove the Suppression of the menstrual Flux, are at the same time the most successful Remedy for moderating the Excess of that Flux. All these Arguments of Experience are further Motives to induce us to believe that Nature is the best Physician. And as good Aliment affords at once Matter for Life and for Death, so the same Motions of the Humors that gave the Disease, do after repeated Circulation, prove the Authors and Guardians of Health, unless their regular Course be disturbed by the Disorderly Methods of some Physicians. Now I am upon this Subject, I cann't but acquaint you by the Bye, that if any one had an Itching-

ing to form a new fictitious System, and to make Med'cines operate by imaginary Qualities, he would be equally happy in Curing, and equally unhappy in Killing, with those who go upon what they call more solid Hypotheses: For 'tis not Hypotheses, but Med'cines that perform the Cure; and that not so much by any sensible Evacuation, as by retrieving the primitive Spring of the Fluids or Solids.

IV.

Many Diseases spring from a trifflingCause, and thereupon Mustering up a dismal Train of Symptoms, are cured without any sensible Evacuation; such are the Bite of a Viper, the violent Disorders occasioned by the Smell of a Ship or the Sea Air, and sometimes reaching the very Agony of Death, the dismal Distempers occasioned by looking upon the Object of one's Hatred, the Diseases arising from passionate Commotions of the Mind,and an innumerable Train of such like Disorders; which are produced in the human Body, without the Ingress or Egress of any visible Matter to foster them, merely by the Impulse of external Bodies, or a violent Sally of Imagination. As many heavy Diseases depend upon a trifling Cause, that sometimes is invisible, and not introduc'd within the Body, so a great many considerable Distempers are cured in a Minute, not by any sensible Evacuation, but by the Production of some new Change in the Position, Texture, Figure, and other Qualities of the Humors that gave the Disease a Being. Such are the Cures of

Quartan

Quartan Fevers or other Diseases accomplished by a suddain Fright, by the Application of specifick Remedies to the external Parts without any sensible Evacuation, by the Change of the Air from one Climate to another, *&c.* Of this last sort of Cure I had a remarkable Instance lately, *viz.* A very good Friend of mine that never fail'd to have the Sciatica and the Piles, in the Neapolitan or adjacent Air, and after a vain Trial of Remedies, is cured almost in a Minute, by coming into *Campagnia d' Romæ*, or to *Rome* it self. The *Chinese*, and other *Indian* Physicians, cure Diseases by burning with the *Moxa* and pricking with a Needle; nay, they cure Intermitting Fevers almost to a Miracle, only by burning in the Ankle; Witness *Will. Tenrine* in his Treatise *de Arthritide*. All this is more than sufficient Evidence that our Constitution may be hurt a thousand Ways, and that Diseases are both produc'd and cur'd after a wonderful Manner that's scarce perceivable by us: For as *Hippocrates* says, 6 *Epidem.* Nature finds Ways to it self without Fore-thought, and does what's expedient without any Instruction. Upon the Whole, 'tis a very imprudent thing in a Physician to confine the Causes of every Disease to the four Humors, to an Alcali or an Acid.

V.

Pliny says, We are ignorant of what we live upon; but to my Mind, we are less acquainted with that which makes us sick: For the very first and immediate *Minimum* that produces Diseases, is truly incomprehensible to us.

us. But now, since we are incompassed with such Difficulties, Whence can we draw our Indications of Cure? Why, I freely own that in such Straits we can only have Recourse to the Testimony of our Senses; that is, after we have long and patiently observed how Nature demeans herself in the Production of a Disease, as well as in the Concoction and Separation of the peccant Humor, we may then establish a Doctrine of Cure nicely calculated to Nature's Footsteps, and still keep in view the Remarks we have made upon the *Juvantia* and *Lædentia*. In this Point, that Reason of which Physicians boast so much, must be subservient to the Empiric Method; I mean the Empiric Way polished by Literature, fatigued by several Processes of Observations, and put upon Action by the Direction of the Mind: For the Helps of Theory do first raise, and then frustrate our Hopes. Who can deny that after all the Anatomical and Physiological Inventions of this Age, we fall still short of the more solid Indications of Cure? And that Physicians are now more divided upon the adjusting of the morbifick Causes and Indications of Cure, than they were before these Rumors of Novelties were box'd about? The Practice therefore of Curing Diseases, must be promoted by Practice it self. This is confirmed by Dr. *Sydenham*, the most diligent Observator we have had since *Hippocrates:* Speaking of the occult Causes of Fevers, he goes on this Purpose; *This I know from manifold Observation, that the above-mentioned Species of Diseases, especially the continual, are so very different one from another, that the same Method which cured*

your

your Patients in the Beginning of the Year, will perhaps kill 'em towards the latter End of it. And again, not much lower, *I have much ado to manage it so that one or two of those who first employ me, are not hurry'd away before I can trace the Genius of the Disease, so as to fix the Cure of it.* In fine, considering this Obscurity and Inconstancy of things, 'tis impossible to be led by Theory to solid Indications; unless the Genius of the Disease be first learned by the Light of Observations, which set forth the various Motions and Tendencies of Diseases.

VI.

'Tis by Vertue of this Observation, that I am taught to abstain from Purgatives and Diureticks in the Beginning of acute Diseases, and to avoid Purges in the Beginning of Intermitting Fevers: That I slight all the pompous Train of Remedies in the Cure of Fevers, and make it my whole Business to mind whether the febrile Fermentation is too dull and apt to coagulate, or too ardent and dispos'd to Dissolution; by which means the Concoction and Despumation of the peccant Matter will be thwarted: That I rouse a dull Fermentation by spirituous and volatile Med'cines, and on the other hand when 'tis too high check it with fixing and moistening Ingredients: That I persist in this Course till I am assured that the feverish Blood is possess'd of as much Motion, as is requisite for a seasonable Despumation and Precipitation of the morbifick Matter, by such Passages as Nature finds convenient, *viz.* those of Sweat, Urine, Stool,

&c.

&c. These, I say, and such other Measures I observe; not because Reason and Speculation built upon Hypotheses has suggested Advice to that purpose; but upon the Account that both my own Experience, and that of the most famous Observators, has taught me, That upon the exhibiting of Purgatives in the Beginning, acute Diseases are inflamed, and Intermitting Fevers turn presently continual, nay and mortal as well as tedious if the Purges are repeated: For in the Course of Nature, I never saw a wholesome *Crisis* in the Beginning of acute Fevers: And *Hippocrates* in *Coac.* says, *Those things which bring a Crisis must not appear immediately.* In the last Place, I pursue this Course because Experience teaches me, That the Cure of Fevers is never more happily compassed, than by keeping the Blood to its due Limits, so as to hinder it from being either too active or too supine, these being the Causes that hinder the Concoction and Despumation of the morbifick Matter. 'Tis these Experiments, I say, that put me upon the taking of such Indications in the above mentioned Diseases.

VII.

To contract the Mater into a narrow Compass, we must know that the Indications of Cure can't be derived from a surer Fund than from the Symptoms that rage most for the time, and are predominant above the rest; for these are the most open and naked Marks of the Genius and Force of the Disease. But in the mean time, we must call to mind, that there are four things to be considered

sidered in every Disease; namely, the Disease it self, the Cause of the Disease, the Symptoms, and the Measure of Strength: And indeed the Physician ought to be so well acquainted with the Motions, Origin, Force, and other relative Circumstances of all these, that he ought to make no positive Conclusion of the Indications, till these four be attentively weighed and collated together, and Provision be made for the most urging Symptom. I must say that no Man can be so expeditious and dextrous in detecting the Indications of Cure, as he who having the Benefit of a long Practice, has made repeated Observations upon the principal Genius of the Disease, and the various Ways of Invasion and Declension; especially if he has employ'd himself before-hand in the reading of the Authors that abound with Precepts and Cautions, such as those I recommended above. If to all these Acquisitions our Physician adds a fertile and masculine Soul, that's capable to display some uncommon Force in detecting the antecedent, concomitant, and obscure Motions of the Disease, the Motions which range very wide and succeed one another; certainly this Man will make a solid Choice of Indications.

VIII.

The Measures I have now laid down, are chiefly conducive in those Diseases, in which all Delays are pernicious, and in which the sharp-sighted Physician qualified with long Practice and equip'd with a sufficient Knowledge of the Vertues of Remedies, whether specifick or common, adjusts several things very prudently, and quickly draws the Measures of the Cure from

the minuteſt Circumſtances; all which can ſcarce be fathom'd by Thought, or expreſs'd by Words. On the contrary, in Chronical Diſeaſes, in which the *Phænomena* are more conſtant and long-liv'd, the moſt certain Source of Indications is the *Juvantia* and *Lædentia*, and a juſt Explication of their Effects, taken chiefly from the Diſſection of thoſe who dye of the reſpective Diſeaſes. Here, by way of Corollary, we may ſuggeſt the Reaſon why the moſt celebrated Practitioners, after the firſt View of the Patient and a ſerious Survey of the Symptoms and Condition of the Senſes, are capable to reach the Knowledge of ſuch Things as are almoſt incomprehenſible, relating to the Diagnoſticks, Prognoſticks, and Cure of Diſeaſes; and that by ſuch occult Ways, that if the Phyſician himſelf were put to it, he could not ſet forth that wonderful Quickneſs and Turn of Apprehenſion and Judgment, that ſerves him in finding out and adjuſting theſe Things. For this Reaſon I take the Method of Cure to be nothing elſe but a practical, adequate, and ſagacious Judgment; that is to ſay, I am of the Opinion that the Springs of all theſe wonderful and occult Things riſe only from a conſummate Practice, by which a thouſand Differences of Things are ſet in a clear Light in a Minute, notwithſtanding that the ſigns of Diſeaſes uſe to be various, uncertain, and general.

CHAP.

CHAP. XI.

Of Specifick Remedies, and their History.

SECT. I.

THere being so great an Affinity betwixt the Remedies and the Indications, we shall never do any thing to the purpose in the Cure of Diseases, till those two are joyned in a closer Alliance, than has been hitherto allotted them. But after all, notwithstanding that Indications without Remedies, and Remedies without Indications, are lame Things; yet, to speak the Truth, 'tis only the Remedies that perform the Cure: And though these Remedies may seem to be given without an Indication, yet the Event gives us sufficient Intelligence of the true Indication. This is manifest in the Practice of the Empiricks, who despising the Methods and Indications of the Rationalists, cure a great many Diseases by the Use of specifick Remedies, as they call 'em. For a second Proof, let's consider that Remedies are as successful when exhibited by the Ignorant, upon a true and sometimes a false Indication, as when given by the Skilful: And on the other hand, Indications without Remedies give no manner of Relief. 'Tis plain therefore that *sola Remedia sanant*, the only Thing that cures is the Remedies: Upon which Consideration, we must own that our Profession wants a History of Remedies, brought to Light, not by a pleasant Luxuriancy of Thought, but by hard Labour and aged Observation; such Remedies as are constant, fortified with the Method of

Prescription, and calculated to every Disease in a specifick and almost infallible Way. Such are, the Jesuits Bark in Agues, Whey in a Dysentery, Mercury and Sarsaparilla in the Pox, the Jovial Salt or Bezoardick in the Hysterick Illness; the Tincture of Amber extracted with Cinnamon-Water, and qualified with a small Quantity of the Syrup of Cinnamon, in Pains after Child-Birth; the acid Spirit of *Sal Armoniack* in the Yellow-Jaundice; and the like.

II.

The same Measures the Historian observes in illustrating the History of Diseases, Causes, Symptoms, and Indications; the same Measures, I say, must be observed in this History of Remedies: In going about which, we must consult the Oracles of the Senses, and the Observations made upon the *Juvantia* or *Lædentia*, or the Event of Remedies; and draw from thence Cautions and standing Precepts, relating to the Use, Quantity, Time, and other Conditions of Remedies. To tell me that Milk is a specifick Remedy to correct the Acrimony of the Blood, will give me but little Light in the Course of Practice; unless I be likewise informed by Authors what Method, Cautions, and Precepts, I ought to observe in prescribing it; and be advised, for Instance, that 'tis safer to give Milk in Spring and Autumn, than in Summer, in which season its Whey is of good Use; that during the Use of Milk, Wine and acid Things must be avoided; that Milk is not proper while the first Passages are crouded with acid Humors; that it ought not to be exhibited in a Looseness, occasion'd by the Crudity of

the

the Stomach; that 'tis very nocive in the Disorders of the Nerves and the Head. Pursuant to this last Caution, I was called lately to a very learned Man, that upon taking large Quantities of Milk, and avoiding all other Food, for about twenty Days, was seiz'd with a dismal Distortion of his Mouth, accompany'd with a painful Distention of the Muscles of the Neck, and almost the whole Body. I tryed several sorts of Remedies, and recover'd him in two Months Time. Milk is an Enemy to the Head and the Nerves, 'tis friendly to the Breast, and raises Wind in the Abdomen. To prevent the souring of Milk in the Stomach, you ought to mix Sugar or Honey with it; and if it does turn soure you must not presently reject the Use of it, but exhibit testaceous Powders for two Days, to absorb the Acid, and then return to Milk; and if after all it still soures or curdles, you must inter-lace it with testaceous Powders now and then. After the Taking of Milk you ought to sit still or walk very gently, taking care to avoid Sleep, and the immoderate Labour either of the Body or Mind; for by such Means it rises in a crude State to the Head, and disposes it to divers Diseases. These and other Cautions you ought to know, before you exhibit Milk; Cautions that Practitioners found out, not by racking their Brains, but by a long Observation of the Events of Remedies. He who sets about the Use of Milk without such cautionary Instructions, is equally criminal with those who choose to walk in the Dark without striking a Light or staying for Day-Light.

III.

What we have said of Milk must be Applied to all other Remedies: for the innumerable unlucky Accidents that fall out, are owing not so much to the Quality of the Remedy, as to a false Indication, or the Defect of Cautions and Precepts relating to the use of it. In Fine, the best Remedies confirm'd by the best Cautions, are all in all in the Cure of Diseases; and hence it comes to pass that sometimes Men of Ordinary Learning, and e'en Quacks will baffle the ostentative Rationalist, only by Vertue of some approv'd Remedy or some solid Caution. Purgatives are the Conquerers of many Diseases; but the imprudent Use of 'em in the beginning of acute Fevers, aud the repetition of 'em in Agues, is still in vogue, to the great detriment of Mankind. Not long ago an ignorant Practitioner prescrib'd a Purge in the very beginning of an Acute Fever, and omitting bleeding, repeated the Purgation on the Seventh day: The Patient thus reduced to a deplorable state, Voided by Stool about four Pints of Clotted Blood on the 15*th* day, and so turned Hectick. Now, I leave it to the Judgment of the Wise, whether the Blood thus voided was not an Argument that he ought to have been Blooded and not Purged in the beginning. In *June* 1695. A Woman at *Rome* of 40 Years of Age, that had been ill of a slow Fever and a Scirrhus in the Stomach for a Year and a half, fell into a Dropsy upon the use of Steel that an old Physician had prescribed, and dyed in a Month's time. For some days before her Death she had such a strangling in the Throat and Gullet that she thought

thought to be Choaked, and could not put down any Eatables. Having opened her Corps, I found the whole substance of the Stomach Scirrhous, and the Womb in like manner Scirrhous, with a small quantity of stinking blackish water in the Cavity of the Abdomen. 'Twould be a tedious task to run thro' the innumerable instances of damage done to sick Persons, by the use of Remedies not guarded with due Cautions and Precepts, as that of Steel in Scirrhus's of the Ventricle and perhaps of the other parts, and of Purgatives in the beginning of ardent Fevers.

IV.

I intimated above that every Disease depends upon a Specifick and peculiar Exaltation of the Humors, or else upon the Exaltation or Specification of the principal Disease, to which it retains; and that all these Specifications of the Humours are subject to nature's Laws like the other Sublunary Bodies. But I must confess I am at a loss to tell you wherein consists that Specification or minute Mixture of the morbifick parts, that exalts every Disease to its respective Species. 'Tis possible the succession of Ages may make such a Discovery, if so be that the Wiser Practitioners apply their Meditations to Practical things, and are not so over fond of Theory as to neglect Practice. In the mean time, 'tis a certain truth that both Chronical and Acute Diseases will be happily conquered by that Man, that either by chance or by a long thread of Practice, lights upon a Remedy that's able to stifle and sink the Species of the Disease. And for a just explication of this matter, there's no occasion to call in the first or second Qualities, as some

have done; for besides that the Essence of the Disease does not consist in such Qualities, we see frequently that several Diseases are scarce moved by the exhibiting of Remedies, whether hot or cold, or moist, or of the other Qualities; unless we light at last upon a Remedy that choaks the Distemper specifically. Hence it comes to pass that many diseases, commonly call'd *Hot*, are cured by hot Remedies, cold Diseases by cold Remedies, and so on; nay, that some Diseases are Cured by Remedies that according to our way of thinking are intirely contrary to Human Nature. Thus we see a great many Sick People Cured by the greatest Errours in the way of Eating and Drinking, or by the use of such Remedies as are directly opposite to their Nature. We conclude therefore, that all these things proceed from the abovementioned Specification of the Humours, and not from Qualities Acting in opposition one to another.

V.

This necessity of Specifick Remedies, seems chiefly to fall upon Chronical Diseases; for considering that these depend upon an Indigestion and Grossness of the Humours, and that in such Cases the Solid Parts are more frequently faulty than the Fluid, Nature born down with the long duration of the Illness, cannot accomplish the Concoction and Depuration of the Morbifick Matter, without a Remedy be Exhibited that speedily Extinguishes the Morbifick Species, or Nature be corroborated by Spirituous Restoratives and Bitterish Med'cines, so as to be exhilarated and inabled to shake off the morbifick Yoak. Pursuant to this thought, I

have

have observed in the Course of my Practice, that the Modern way of Prescribing Spirituous Volatile and Active Remedies is very serviceable in Chronical, and highly Prejudicial in Acute Diseases: For the fermentations of the latter being quick and over active, without any disorder in the solid Parts, Nature either of its own accord, or prudently assisted by Art, Performs the Concoction and Despumation of the morbifick Matter, with sufficient quickness, and sinks the Species of the Disease by due Evacuations. But if Acute Diseases derive their Origin from the occult Qualities of the Air, or a Change of Weather; there is no surer way of looking for Remedies to stifle that new Species, than the diligent and repeated observation of what gives Ease and what Exasperates: Accordingly we see some Remedies that cure Epidemical Diseases, are hurtful in the same Epidemical Diseases that happen in another Season of the Year.

VI.

Now, that I am speaking of Acute Diseases, I must take Notice by the bye of the Grand Mistake of those, who throw in such a Crowd of Med'cines upon Acute and Inflammatory Diseases, till Nature not knowing where to turn her self, and variously tossed, what with the violence of the Disease, and the load of Medicines, is forc'd at last to give way and sink under the Burden. Indeed 'tis no wonder that such is the Consequence, for acute Diseases, especially acute Fevers, are frequently cur'd of themselves, as in the case of the Poor and the Country People; by reason

that

that the same force and impetuousness of the Humours which raised the Fever, disposes them to a Precipitation of the Morbifick Matter at the set time of concoction; and this Precipitation being the Work of Nature, its Regular Motions ought not to be Perplexed, and Thwarted by such a Frequent or Immethodical Administration of Med'cines; or if it is, neither does the Fever lessen, nor the Crisis succeed at the appointed time, but the Patient struggling with a doubtful Case, either dies or falls into Chronical Diseases.

VII.

Practitioners lye under Great Prejudices, as to the use of Remedies, in Acute and Chronical Diseases; some of which I shall now hint at. A great many use that long Train of Remedies, upon this Consideration, that among so many one will certainly be found that's capable to dispel the Disease. But how stupid is this Plea? I can't forbear saying upon this Head, what *Appius Cæcus* told the People of *Rome* when they were thinking to clap up a Peace with *Pyrrhus*; *I have bore*, says he, *with a great deal of Patience my Blindness for several Years; but now I wish I were likewise Deaf, that I might not hear such base Motions*, &c. Some make Specious, but Fallacious, Degrees of Med'cines, calling some great, others slight; and begin at first with what they falsly take to be the slighter sort, rising by degrees to the Greater, if the Disease do's not give way. With this View, they prescribe, especially in dangerous Cases, first of all a Purge, then Bleeding, or *e contra*; then they inject Glysters and exhibit Syrups, and con-

continue to repeat all in a Circle as 'twere till they observe that the Disease either do's not decline or grows worse; upon which they have Recourse to their great Remedies, namely, large Blistering Plaisters, Scarifications, Hot inflaming Applications, stronger Purgatives, and a great many such things; And if these do not compass the End, they come at last to wait for the Crisis, and are not asham'd to expect a Crisis from Nature, after they have tortur'd her with such butchering Med'cines, and Perplex'd her with such a contrary Method.

VIII.

The Forms of Prescription must be vary'd Pursuant to the Variety of the Constitution, the Habit of the Body, Age, Country, Antecedent Causes, *&c.* Aperient Med'cines, for Instance, are of general use against all Obstructions; but the way of Exhibiting must be diversify'd according to the variety of Circumstances; for a Liquid Form agrees best with some, a Solid Form with others, *&c.* I tended lately at *Rome*, a meagre thin Man, that after a Double Tertian was mightily troubled with a slow sort of Fever and swellings in his Neck. His Tongue was Sliny, his Belly Costive, his Urine high colour'd, with Watchings, *&c.* Upon taking a Cachectick Powder of Sulphurated Steel, Cinnamon and Sugar, he grew worse, and his Belly was distended with Wind. Upon a mature consideration of these Symptoms, I Prescrib'd Aperitives of the depurated Juices of Succory, Borrage, and Sow-Thistle, the repeated use of which recover'd him perfectly. On the contrary, I prescrib'd the same Juices to another Patient, that was like-

likewise Lean and Meagre, and tho' they carry'd off his Lingring Fever, yet the continued use of them threw him into prodigious Night-Sweats, which at last he got clear of by discontinuing the use of the Juices.

IX.

'Tis in vain to strut and spurn in Defiance of the Power of Death, or to repulse the Violence of Diseases with the Awe of Disputes. *Sola Remedia Sanant:* Wherever the Science is weak, 'tis only Remedies that keep up its Majesty and Weight. I take it, therefore, nothing can be more conducive to the Health of Mankind, than Physicians their applying themselves to make daily Discoveries of new Remedies, or guard more effectually these we know already, with solid Precepts built upon Observation. A Phthisick arising from an Ulcer in the Lungs, is commonly branded as incurable, upon the Plea that the Ulcer is internal and occult, and cannot be cleansed like other external Ulcers. But why do they not make it their Business to find out the true Situation of the Ulcer, and make an Incision accordingly between the Ribs, to the end that proper Remedies may be convey'd to it? For my Part, I know no Reason why that should lie neglected. About seven Years ago, when I was at *Padua*, a Man received a Wound in the right side of his Breast that reached to the Lungs; and imploying an able Surgeon, had an Incision made between the Ribs to the Length of six Fingers Breadth, in Order to discover the Situation of the Wound in the Lungs; which was perfectly cured in 2 Months time with Vulnerary's apply'd with

Tents

Tents and with Syringing. Now Practitioners ought to use the same Piece of Diligence in Curing a phthisical Ulcer in the Lungs, lest the Scroll of incurable Diseases should grow too long, to the infinite Disgrace of the Profession. Believe me, Gentlemen, assiduous Thought and Use improves and whets the Mind; but Sloth and Despair break its Edge.

X.

If in any Case, certainly in the Practice of Physick we ought to know much and do but little, especially in Curing very acute or complicated Diseases; and to stiffle that fatal Prejudice of some Patients, who fancy that Diseases are never well cured but by great and numerous Remedies, and either despise or distrust simple and cheap Prescriptions. Oh! the Ignorance of the Vulgar! How many Men worn out with the long Tyranny of Diseases, and the frustraneous Use of Remedies, have at last, by committing themselves to Nature, quickly recover'd a healthy Countenance and a free Respiration? How many have been cured by Negligence or Indulgency, who had otherwise fallen a Sacrifice to the Hands of the Learned? History is Evidence of the firm Health of the first Inhabitants of the World, who neither consulted nor courted the Professors of our Art. Let me therefore conjure at once the ignorant Vulgar and the forward Physician, to contract these Forms of Remedies; for oftentimes the Repose of the Bed, Retiring from Business, and even an Abstinence from Remedies cuts the Sinews of the Distemper, that the frustraneous Use of Remedies would have inflamed.

XI.

XI.

Our Historian's remaining Task is to inquire, how the Remedies operate upon us: But in regard this is a very deep Point, and lies at the remotest Distance from the Senses, 'tis the Business not of one Man, but of a whole Society of Physicians: For to illustrate that Subject, there's a necessity of taking in many things from Chymistry, from the Mechanicks, from Anatomy, the Principles of natural and experimental Philosophy, *&c.* I own indeed that upon the repeated Meditation and Experience of Physicians, the Effects of some Remedies are at this Day better known to us, than they were in former Times to the Ancients: And 'tis to be wish'd we could say the same of all. But such is the Difficulty of this Enquiry, that Nature does with Remedies, what a Fellow in a Ditch does with a Board that's reach'd him by his Companions; for in order to get out, he lays the Board sometimes to the Right, sometimes to the Left; one while he lays it under his Feet, and another while sets it against the Wall, and so chops and shifts about till he gets out. When we exhibit a Remedy, Nature does so turn it about, as to make use of it sometimes in raising drooping Fermentations, in separating the nocive, depressing the volatile, and disentangling the tenacious Humors; and thus by a secret Art best known to its self, it disposes the Remedy so as to answer its various Indications.

CHAP.

CHAP. XII.

A Centaur, or a View of the Paradoxes of Modern Physicians in deriding Crisis's, Critical Daies, &c.

SECT. I.

AMong the other Abuses that have crept into Physick within these few Years, we can't but take notice of the Derision of *Crisis*'s, of Critical Days, of the Motion of Diseases by odd or even Days, and such other Observations as were made by the ancient Family of Physick, to the unspeakable Benefit of Mankind. Now there are two Things that tempt our Upstarts to contemn this Sedulity of the Ancients. One is the Prepossession occasion'd by the Books that come out now adays in shoals in Opposition to the Wisdom of the Ancients. The Mind of the Reader being once tainted with that Leaven, takes all the ancient Positions to be false; or out of Complaisance to the Genius of the Age, derides 'em most filthily. The second is the common Way of Curing Fevers, which being speculative, fallacious, and various in Pursuance of the Variety of *Hypotheses*, can't but oppose or disturb the Motions of Nature in the Production of a *Crisis*; and so the critical Motions of Nature not answering Expectation, the whole Doctrine is branded for an idle Whim. But to speak to the Purpose, and to retrieve the ancient Splendor of this Doctrine, which is the chief Foundation of the Cure of Fevers: The Deriders themselves acknowledge that the Blood is a fermenting Liquor, and when feverish, or otherwise

otherwise disorder'd, is subject to the same Rules of Crudity, Ebullition, and Depuration, with other fermentable Liquors. Now, in these Liquors, Nature has established a Law, that each of them shall accomplish the Motions of their Fermentation and Depuration in a determin'd space of Time; and we find that this Law is exactly observ'd: For the Time that Stum spends in performing its Depuration is different from that requir'd by Ale, Cyder, and other Liquors. The same Remark holds in Fruit, each of which comes to their Maturation in a determin'd Number of Days; and 'tis in vain to offer any Artifice to make Fruit, or other fermentable Liquors, accomplish their Maturation before the set Time of Nature; for such Violence makes 'em corrupt, rather than ripen.

II.

Since the feverish Blood agrees with other fermenting Liquors in several Circumstances, I see no Reason it should not likewise agree in performing the Depuration and Concoction of the peccant Matter in a set Interval of Days or Months: Especially considering that *Hippocrates* and Experience are Evidence that simple Tertians go off of themselves in seven Rounds, an *Ephemera* in 24 Hours, a *Synocha* in four Days, the particular Fits of Fevers in a set Measure of Hours, and so on. Nay, so constant is the Order of Nature in accomplishing the Concoction and Depuration of the peccant Humors in a set measure of Time, that some Fevers hold out against all Med'cines whatsoever, till such time as the Space allotted by Nature for the

the Despumation is over; nay, the unseasonable and indiscreet Exhibition of Purges, Febrifuga, *&c.* not only exasperates or duplicates the Disease, but likewise paves the Way to Death, by Vertue of the great Confusion and Hurricane it occasions in the Humors in thwarting the regular Motions of Nature. This Remark I have made frequently in acute and Intermitting Fevers.

III.

This Purgation of the feverish Blood at a set Time, is called a *Crisis*, as being a solemn Effort of Nature, by which, after passing the Rounds of Crudity and Ebullition, the peccant Matter is expell'd. In the Country, and where Physicians are not employ'd, we meet with a pleasurable Instruction in seeing these *Crises* or Despumations of the peccant Matter, perform'd by the Way of Sweating, of a Looseness, of Urine, and such other natural Ways, and finish'd with a regular and orderly Motion. *Hippocrates*, and his Country-Men the *Grecians*, being aware of all this, did so religiously observe these Motions of Purging Nature, that in the Cure of Fevers they prescrib'd but few Remedies, for fear the unseasonable Use of 'em should disturb the Government of the internal Soveraign. In the Cure of Fevers, particularly those call'd acute, *Hippocrates* us'd but very few Remedies; and abating for a gentle Vomit, Glysters, or the like, which he was forc'd to give in the Beginning, he us'd nothing in the Progress of the Disease, but only a Ptisane variously contriv'd according to the Genius of the Disease; and leaving the rest to Nature, ex-

pected a *Crisis* with Patience and Watchfulness; as it appears from his Book *de Diæta acut.*

IV.

'Tis no Wonder that *Crisis*'s do not succeed now adays either so frequently or so perfectly, as they did of old in *Greece*; since Physicians either not knowing or disproving the *Grecian* Measures, murder their Patients, in a manner, by prescribing from the Beginning to the Declension of the Disease Purgatives, Diaphoreticks, Bleeding, and spirituous Remedies; and acting both imprudently and unseasonably in their other Measures; insomuch that the Humours thus distracted by the divers seditious Motions of Remedies, can't possibly compass a critical Despumation at the Time appointed; but being toss'd in eternal Confusion, terminate in præternatural Translations instead of a perfect *Crisis*; so that the Rules handed down to us by the Ancients, with reference to *Crisis*'s, Critical Days, and the other Motions of Nature, are not observ'd in the Course of Fevers. But 'tis alledg'd that evacuating Med'cines are necessary in the Beginning, to the end that part of the peccant Matter being thus carry'd off, the Disease may be thereby weakned, and Nature may apply it self more strenuously to the Concoction of the rest. This Observation goes against Experience, in regard that Evacuations perform'd in the Beginning, and while the Disease is yet crude, are frequently suspected and dangerous, and are unconcluding *Crisis*'s, as *Hippocrates* says; for they are so far from impairing either the Disease or its Symptoms, that they serve to exasperate 'em; it being

ing not the due Separation of Nature, but the Force of Irritation that gives rise to the Evacuation. Since Nature therefore never moves crude Matter in the Beginning of Diseases, or while it is yet blended with good Juices, doubtless such an Attempt is very unbecoming in Art, the Interpreter and Minister of Nature. When any Physician either thro' Ignorance, or from Spite to an opposite Sect, makes such an Attempt, the stronger the Purgatives, Diaphoreticks, or other Med'cines are, the greater Confusion will insue in the Humors; and for that Reason, such Med'cines will make but a small Evacuation; or if it be large, 'twill tend to the Detriment of the Patient by inflaming the Symptoms, and either prolonging or adding a mortal Sting to the Distemper. On the other hand, if the same Med'cines are given, tho' in a small Quantity, towards the End of the Concoction, they make not only a copious Evacuation, but such as pacifies the Symptoms, and eases the Patient. But after all, I must confess there are some Fevers in which the peccant Matter ought to be expell'd by Sweating, or other more natural Ways, without staying for a Concoction; by reason of a concomitant Malignity that dispose the Blood to a fatal Coagulation, and accelerates Death by staying longer in the Humors; or by reason of their being produc'd by bad Food, or such other Causes. In this Class we reckon your epidemical, contagious, and malignant Fevers; in which all Delays are pernicious, upon the account that they are wont to carry off the Patient very speedily. Some will tell you that Purgatives are necessary in the Beginning, in order to dislodge the Crudities of the first Passages amass'd

by over-feeding, and furnishing Matter for the Disease to work upon. But be it known to these Gentlemen, that the Crudities of the first Passages digest of their own accord, or rather are concocted by the exhibiting of stomachick Med'cines, and such as whet and corroborate the digestive Force of the Ferments; and not by the imprudent Use of Catharticks, which convey them more effectually into the Mass of Blood, and either heighthen or feed the Distemper: So that even in this Case, Purgatives are improper in the Beginning.

V.

Tho' the Order of Nature in bringing about the Effects of Things is constant and perpetual, yet it uses to be so thwarted by Opposition, that its Method varies in Pursuance of the Variety of the Obstacles it meets with. This Truth is verify'd to a signal Degree, in the Case of *Crisis*'s; for in travelling over *Italy* and *Dalmatia*, and making close Remarks upon this Head, I learn'd that tho' *Crisis*'s are the constant Motions of Nature, yet they vary in Proportiton to the Variety of the Method of Cure, the Season of the Year, the Country, Way of Living, Constitution and Age of the Patients, *&c.* In Winter both the Chilness of the Air, and the Use of grosser Food, have that Influence upon the vital Juices of the Body, that in that Season they are somewhat ropy and unqualify'd for quick Motion; the Mass of Blood being at the same Time crowded with Impurities, by reason of a scanty Transpiration. Now, the Fevers which happen in this Season of the Year, and while the Blood is thus

dispos'd,

dispos'd, require a long Interval of Time for accomplishing the Despumation of a perfect *Crisis*; nay, the above-mention'd Crowd of gross and heterogeneous Particles, puts the Humors into a mighty Confusion; insomuch, that they can hardly reach the regular Despumations of Nature. In that Season Fevers are likewise less acute, and less ready for a speedy Despumation, than they are in Summer. For the same Reason we find, that in the fenny and northern Countries perfect Crisis's are seldom met with; according to the Attestation of the *Germans*, and of the Physicians of other cold Countries. Now, in such Cases, we must have Recourse to Med'cines that have some Heat in 'em; to digestive and corroborating Med'cines, which exhilarate Nature so as to excite such a Motion in the Blood, as is requisite for going thro' the Depuration perfectly and at the set Time. In Spring and Summer we find that the Poor and the Country People, who seldom Trouble Physicians, are cured in a few Days of acute and inflammatory Diseases by Vertue of a healthful *Crisis* made by Sweat, Urine, or Stool; and that without any other Remedies but Bleeding, (if there be occasion) a thin Diet, and diluting Ingredients, calculated to the Heighth of the Distemper. For the elastick Force of the Air, and consequently the insensible Transpiration being increas'd in Spring and Summer, the Humors are thereby render'd more nimble and pure; so that the morbifick Dross that's blended and boil'd up with them, is sooner disengag'd, concocted, and expell'd by subsequent Crisis's. The same Parallel will hold between hot and cold Countries, a hot youthful Constitution and a moist aged Temperament, *&c.*

VI.

For the same Reasons, the Crisis's were regular in ancient Times in *Greece* and *Asia*; for the Air of those Countries lying to the Eastward, and being very pure and thin, not only the Vines and the other Fruits of the Earth come to a speedy Maturation, but even the Mass of Blood, untainted with gross and impure Particles from the Air, and possess'd of a notable Agility and Purity, is sooner clear'd by the natural Crisis's of the morbifick Particles that raise it to a febrile Effervescence, than it could be in a gross, marshy, and cold Air: So that the Heat of the Climate, and Season of the Year, and the Thinness and Purity of the Air, are an Argument of quick and perfect Crisis's in acute Diseases. But all these Advantages will be of no Use, unless we follow the Method of *Hippocrates*; who being taught by long Experience that Nature is the best Curer of Diseases, especially such as are acute, prescrib'd but very few Remedies in the Beginning of such Disorders; and when the Distemper tended towards the Heighth, laid all Remedies aside (provided the Genius and Malignity of the Disease allow'd it) and leaving all to Nature, waited securely for a Crisis. But our modern Practitioners, either forgetting or contemning such Precepts, not only fatigue the Patient with repeated Forms of Remedies during the whole Period of the febrile Accension, but turn the Disease, that of it self is favourable and mild, into a chronical and mortal Illness.

VII.

VII.

I may safely say, without infringing upon the Measures of Modesty, that I have oftentimes cur'd inflammatory Fevers, especially those which accompany the Small-Pox, by Bleeding, and a thin Diet, with a prudent and seasonable Use of diluting Med'cines: And when I pursued this Method, I never had a Patient ill of the Small-Pox that dy'd under my Hands. In mentioning Bleeding as part of the Cure of the Small-Pox, I only meant that I use it when the over-bearing Heat of the Fever, the Impulse of the Humors upon the Head, or other *Viscera*, and such like Symptoms do require it. I observe the same Method in the other continual and acute Diseases; for in the Beginning of such Disorders, I prescribe such Remedies as are sufficient to keep the boiling Blood within the due Bounds of Fermentation: But when the Disease moves towards the Heighth, I look on with Attention, and leave the rest to Nature, depending upon it for Advice, as to what Course I must steer in expelling the concocted and divorc'd peccant Humour. You cann't imagine what Pleasure I have had, after the Pursuit of this Method, in seeing the febrile Fits succeed by gentle and friendly Turns, and run their Rounds in the appointed Order of Nature; in seeing the feverish Ebullition carried on in a natural Order without the Perplexity of furious Symptoms, or the unseasonable Commotions of Remedies; in seeing the regular and finish'd Course of the Crisis's or Depurations of each

Fit, as well as the general Despumation at the End of the Disease: But on the other hand, when Nature was teaz'd and thwarted with the continual use of Remedies, I always observed that every thing grew worse and worse.

The End of the second Book.

A DISSERTATION OF THE ANATOMY, BITINGS, AND OTHER EFFECTS Of the venomous Spider, call'd, *TARANTULA.*

The PREFACE to the *Reader.*

ALL the Authors that writ of the Tarantula, *have either gone upon Hearſay, or coin'd ſeveral Things at Pleaſure. None of 'em ever was in* Apulia (alias Puglia) *where that Creature chiefly diſplays its Venome, abating for* Epiphanius Ferdinandus *au* Apulian, *that added to his practical Obſervations ſome Hiſtories of Perſons bit with the* Tarantula. *This Province being therefore untouch'd, or only*

ly made known by some general and confus'd Hints, I chearfully took up a Resolution two Years ago, of Writing upon the Subject; to which I was much incouraged by the earnest Desire of Joh. Jacobus Mangetus, *a noted Practitioner of* Switzerland; *who acquainted me, by very civil Letters, that a just Account of that Matter would give great Light into the History of Insects, and the general Nature of Poisons; and withal, that if I would undertake it, he would put it into his* Bibliotheca Medico-Practica. *In Compliance with the Request of my Learned Friend, and with a Design to gratifie the Republick of Letters, I then writ an undigested and confus'd Account; which now, upon mature Consideration, is presented to the Reader in a more regular and methodical Order, with large Additions. Here you will find, that, in Pursuance of my wonted Custom, I keep close to Observation and Practice, and always allow them the Preference. If you find that sometimes I grovel on the Ground, and do not aspire to much Reasoning, in treating of the Effects of the* Tarantula, *and the Remedies that cure its Poyson, impute it to my natural Timorousness, which makes me always very cautious of cutting the right Thread of Nature, by unlearned or unjust Ratiocination; that having occasion'd many Errors in the Way of Physick, as it appears from those Authors who fall in with that Prejudice. After a due Survey of the Nature of the Poyson of the* Tarantula, *and its Analogy with other Diseases, I take in a great many Things relating to the mechanical Doctrine of Musick, Poyson, and Dancing. I have likewise given a short Account of the Discoveries made upon the Eggs of Oysters, and the genuine Nature of the Serpentine-Stone call'd* Cobra de Capelo, *which is cry'd up for extracting Poyson. In fine, whatever I have said upon these Heads, I submit to the Judgment of the Learned.*

Rome, *Nov.* 13. 1695.

CHAP.

CHAP. I.

The Etymology of the Name, and the ſeveral Sorts of Tarantula's.

A *Tarantula* is a venemous Spider, ſo call'd from *Tarentum*, an ancient City of *Magna Græcia*, upon the *Ionian* Sea. Thoſe who are once bit by it, are never quite cur'd of the Venom; for it revives every Year, and occaſions a long Series of Evils, which would be very annoying to the Patients, if they did not take due Care of their Health by Dancing and Balls. This Animal is called *Tarantula*, not that 'tis more virulent at *Tarentum* than in the other Countries of *Apulia*; but perhaps becauſe, in the Time of the *Grecians* and *Romans*, that City was more noted and more frequented than the reſt; ſo that the Inſtances of Perſons bit by this Spider, were more numerous there than elſewhere; and thereupon the Animal derived its Name from the City. The Name of *Araneus*, or *Spider*, is common to the *Phalangium*, the *Tarantula* and the *Tetragnathius*. *Pliny* reckons up eight Species of Spiders, *Lib.* 29. *cap.* 24. *Avicennas* twelve, *Lib.* 4. *fen.* 5. *tract.* 5. *cap.* 5. and four more, *cap.* 9, 10, & 11. But upon this Head you ought to conſult *Aldrovandus*, the learned *Lyſter*, and the other approv'd Authors. As for my part, I chooſe for Clearneſs ſake to divide Spiders into the *Octonoculi*, or thoſe of eight Eyes, and the *Binoculi*, or thoſe of two; which differ from one another in Magnitude, Subſtance, Colour, Feet, Stings, the Number of their Eyes, *&c.*

The

The *Tarantula* is a Species of the *Octonoculi*, and of this I mean to give a short but curious Description. 'Tis true, such a History may seem to be of small Importance to the Practice of Physick, as being confin'd to the Inhabitants of *Puglia*; but at the same Time it affords great Light to the difficult Province of venomous Diseases; for a due Parallel between the Symptoms of the *Tarantula* Poyson and those of other sorts of Venom, will furnish us with a more solid *Diagnosis*, *Prognosis*, and Cure of Diseases. Tho' a *Hydrophobia* be the Effect of the Venom of a Dog, yet *Borellus* observes, *Cent.* 3. *Obs.* 38. That he met with it in a Man that had never been bit; it being produ'd by a peculiar Exaltation of the Humors, and much of a piece with the Madness occasioned by the Bite of a Dog. *Salmuth* in like manner observ'd it in a malignant Fever, without any previous Bite, and branded it for a Harbinger of Death; *Cent.* 2. *Obs.* 52. Among the Ancients, *Cœlius Aurelianus* describes an *Hydrophobia* that came of it self. Now to apply the *Simile*, the Venom of the *Tarantula* is accompany'd with some Symptoms which bear a near Resemblance to the Symptoms of Melancholy, the Green-Sickness, and other Diseases. Tho' Madness is a quite different Disease from a *Hydrophobia*, or an Abhorrence of Liquids, yet oftentimes 'tis successfully cur'd by the repeated Immersion of the Patient in Water, as we are wont to do with the *Hydrophobi:* And this is confirm'd by the Experience of a very famous physician of *England*, as we are inform'd by *Helmont junior*, in his *Tract. de Homine.* §. 29. *f.* 33.

CHAP.

CHAP. II.

Of the Nature and Situation of those Countries in which the Tarantula *is bred.*

THat Country which is now known by the Name of *Apulia*, was call'd by the ancient Grecians *Magna Græcia*, and by a general Name *Japygia:* They ſubdivided it into *Daunia*, *Peucetia*, and *Meſſapia*; from *Daunius*, *Peucetius*, and *Japygius*, the Sons of *Lycaon*, that in ancient Times govern'd *Apulia*. The modern Name of *Daunia* is *Capitanata*, which is waſh'd by three Rivers, namely the *Frento*, the *Cerbalo*, and the *Offanto*. Upon the right Bank of the laſt, we ſtill obſerve ſome Rubbiſh of the Famous *Cannæ*, at which was fought that celebrated Battle between the *Carthaginians* and the *Romans*, that had almoſt prov'd fatal to the latter. The ancient *Peucetia* is now call'd the Province of *Bari*; as the antient *Meſſapia* goes by the name of *Lecce*. Theſe three Provinces make one continued Plain, abating for the Mountain *Garganus* in *Daunia*. Upon this Mountain we gather the officinal purging *Manna*, which is commonly call'd *Mountain-Manna*. It produces likewiſe ſeveral noted Medicinal Herbs, which all the Apothecaries of *Italy* make choice of, as being the more active and penetrating. From the River *Offanto*, to the *Capo di S. Maria di Leuca*, we have a wonderful Plain, comprehending the Provinces of *Bari* and *Lecce*, and extending to 120 miles, with no Rivers, and but very few Rivulets, inſomuch that the Country is very much parch'd in the Summer.

The

The above-mention'd *Apulia* lies Eastward, nd stands expos'd to the East and Northerly Vinds. In Summer its Showres are very un-equent; and in a word, *Apulia* is expos'd to he scorching Beams of the Sun, by Vertue both f the Dryness of the Soil, and of its Vicinity o the East; and the Inhabitants breath in an Air that feels as if it came from a burning Oven. But at *Lecce*, and upon the adjacent Shore, there comes usually a little before or after Noon, a Westerly Breeze from the *Adriatick*; which mitigates, in some Measure, the scorching Heat of the Sun. This Temperament of the Climate, is match'd by that of the Inhabitants; for, generally speaking, they are of a hot, scorch'd Constitution, with black Hair, and a brownish or palish Skin, meagre, impatient, peevish, watchful, very quick in their Way of Apprehension, nimble in Reasoning, and extream active. They are very subject to ardent Fevers, Frenzies, Pleurisies, Madness, and other inflammatory Diseases. Nay, the Heat is so excessive in that Country, that I have seen several of the Inhabitants urg'd by it to the last Degree of Impatience and Madness.

Notwithstanding the above-mention'd Inconveniencies, *Apulia* is inferiour to no Country in *Italy*, for the incredible Fertility of the Soil; for the Healthyness of a pure, dry, and free Air, that is not tainted with the Foulness of stagnating Water; for the pleasant Prospect of the Sea, and an Affluence of Fish, and all sorts of Meat. To be plain, in all my Travels thro' *Italy*, *Dalmatia*, *&c.* I never met with better scented and better tasted Fruit than in *Apulia*. All their Wines almost are black, but withal so fragrant and powerful, that they would serve

better

better for a vulnerary Balſam, than an Intertainment at Table. The Province of *Bari* produces great Plenty of Wheat and Almonds, upon which 'tis call'd the great Barn of *Italy* and the adjacent Countries. The Province of *Lecce* abounds with Oil, Wine, and Wheat; and the Oil of this Country being reckon'd the beſt Oil in *Italy*, is exported to all foreign Countries. The Plane, the Poplar, and the other ſhady Trees that are chiefly valued for Pleaſure and Refreſhment, are very uncommon in *Apulia*. The manur'd Fields are plentifully ſtock'd with Olives, Vines, and Wheat; as the unmanur'd are with Roſemary, Sage, Penny-royal, and Thyme, the common Paſturage of the Animals of that Country.

Now ſuch is the Temperament of the Climate, Soil, and Inhabitants of this Country, a geographical Deſcription of which you have in the firſt Figure of the annex'd Cut, and in which the *Tarantula* breeds; being a little Animal impatient of Cold, that keeps under Ground in Winter, during which Time it takes no manner of Food. About ten Years ago, when I was at *Naples*, I ſhut up ſeveral of them in a Vial half full of Earth, immediately upon their coming from *Apulia*, and found that they lived for above a Month without Food.

Tho' this Inſect infeſts Men and other Animals, yet 'tis more infeſted it ſelf by a little Creature not unlike a Waſp, with a ſtreak'd parti-colour'd Back, and a blackiſh Belly; which greedily hunts, kills, and feeds upon *Tarantula's*, and the other ſorts of Spiders. But, what is yet more wonderful, the *Tarantula's* are ſo hoſtile one to another, that if you put ten of them in one Veſſel, they'll kill one another 'till only one

one survives the rest; nay, if you shut but two up in any one Vessel, the one kills and eats the other in a very short Time.

In Winter they lie close in their Dens, and in Summer they straggle out and haunt the open Fields, where they lie in wait for Travellers. When the Peasants have a mind to catch 'em, they come to their Holes, and with a small Reed imitate the murmuring buzzing Noise of Flies; upon which the *Tarantula* comes forth in quest of the Flies or Bees thus counterfeited, and falls into the Snare. They have likewise a way of taking them with a small Switch; for upon wagging the Switch so as to make an agreeable Hissing, and holding the End of it to the Mouth of the Hole, they come out and crawl up the Wand.

CHAP. III.

The Anatomy of the Tarantula.

A *Tarantula* is a sort of Spider or *Phalangium*; an accurate Description of which you have in the second and third Figures of the annex'd Cut. It has eight Feet, four on each side, and each Foot has three Knots or Joynts. The two Fore-feet are less than the other six; and this Diversity of the Magnitude of Feet is common to most Spiders; for sometimes the fore, and sometimes the hind Feet are the longest; and this, I take it, is so contriv'd by the Almighty Architect, both to favour their Agility, and to qualifie 'em for the convenient Weaving of various Webs.

An *Apulian Tarantula* is equal in Bulk, or rather

ther bigger than a Wallnut; its Magnitude is much the ſame with the Draught of the ſecond and third Figure. Its Body is divided into two principal Parts, namely the Breaſt and the Belly; which ſeem to be diſ-joyn'd the one from the other, but in Effect are joyn'd by a ſlender Ligament or little Knot. The Head is not ſever'd from the Breaſt and Shoulders, as being a Continuation of the ſame. The firſt Thing we meet with in the Head is a Bone, from which there grows out two Webs like a hooked Pair of Tongs or Pincers, (*a a*) the Point of which is very ſharp, and by that Means they pierce the Skin very readily like two Spouts of Poyſon. The Subſtance of theſe Webs is cruſty and friable, and in the Male *Tarantula's* they are firmer and ſharper than in the Female. Theſe Pincers you may ſee accurately delineated in the *Micrographia* of *Philip Bonanni* the Jeſuit, whoſe Hiſtory of the Vatican will be ſpeedily publiſh'd. Next to the Webs or Tongs we meet with two little Horns, (*b b*) which take their Riſe not far from the Webs, and have two Joynts: The outermoſt Point of theſe is ſharper and ſmaller in the Females than in the Males, as you may ſee in the Cut. Theſe Horns they move continually and forcibly, eſpecially when they approach to their Prey.

They have eight Eyes in their Head, which is likewiſe obſerved in all the *Phalangia* and larger Spiders that weave Webs, as well as our *Tarantula:* But the *Binoculi*, or thoſe which have but two Eyes, weave no Webs that we know of, and differ from the *Octonoculi* in Magnitude, Figure, Subſtance, Proportion of Limbs, *&c.* Their Eyes are ſmooth and bright, and free of the little Riſings obſerv'd in other Inſects.

Four of theſe Eyes are bigger than the other; that is, there are two on each Side of the Head which are eaſily perceiv'd without the Help of a Microſcope. The other four are leſſer; they lie in a parallel Line under the former, and are ſcarce perceivable without a Microſcope. All theſe are to be ſeen in the annex'd Figures. Their Eyes are ſometimes black, and ſometimes blewiſh. In the mean time I am at a loſs to tell you what Motive induced the Almighty Architect to alot ſuch a Multiplicity of Eyes to the *Tarantula* and the other weaving Spiders, unleſs it be that the Plurality of Eyes facilitates the weaving Part; for, as I intimated already, thoſe which do not weave have but two Eyes.

The eight-ey'd Spiders have a Belly that's divided by a great Inciſion from the Breaſt, and their *Anus* ſhews ſome Riſings or Appendages, which ſend forth the Threads of which the Webs are weav'd. The *Taraatula* is a hairy Animal, and the Hair riſes very obſervably all over the Body. The external Colour of the Body is various, for ſome are of a quail-colour, others of an aſhy or whitiſh, and others again of a blackiſh flea-like Colour; nay, ſome have Spots and Stars here and there. Thoſe of a quail or a whitiſh Colour, have a round Belly and a little Mouth; but the ſpoted have a ſharper Back. Their Skin is ſoft; in the Males 'tis harder than in the Females, only it does not go the Length of a cruſty Subſtance.

I wave the Viſcera of the *Tarantula*, upon the Conſideration that their friable and ſoft Subſtance renders the minute Structure unperceivable: But I have a ſtrong Mind, ſometime or other, to put 'em into ſome ſtiptick Water, that ſo their Parts being conſolidated may bear the

the Knife. *Hoochius* in his *Micrograph. Obſ.* 47. affirms of the long-footed Spider, that it reſembles a Sea-Crab, and that its inward Parts would be found not unlike thoſe of the Sea-Crab, if their brittle Subſtance did but allow of Diſſection. Among the inward Viſcera we may reckon the Receptacles of the Threads, ſuch as the *Italians* have lately diſcover'd in the Silk-Worms, and of which the learned *Rhedi* diſcourſes at large in his Book *de Gener. Inſect.* where he likewiſe advances many curious and remarkable Things of the Spider's Thread. Here I muſt obſerve by the Bye, That the eight-ey'd Spiders void none but liquid Excrements; whereas thoſe of the two-ey'd are always ſolid, notwithſtanding that both of 'em feed equally on Flies and ſuch other Inſects.

CHAP. IV.

A Deſcription of the Seed-Veſſels, the Egg, and the Generation of the Tarantula: *With ſome occaſional Remarks on the Eggs of Oyſters, and on Seed in General.*

THE *Tarantula* takes its Origin from an Egg, and propagates its Species by the ſame Means as well as all other Animals. Their Species conſiſts of Male and Female that couple together, and are endow'd with proportional ſeminal Veſſels; that is, the Female is provided with an *Ovarium*, and the Male with ſuch Organs as prepare a prolifick Spirit, and even with a Pizzle which riſes from the Seam that joyns the Breaſt and the Belly, and has a black-

ish Colour with a wreath'd Form, not unlike the Sting of a Fly, as the excellent *Marcus Aurelius Severinus* has well observ'd in his *Zootomia*.

The Males are less than the Females, and of a dryer Structure, as you may see from the annex'd Figures; and the Females have longer and nimbler Feet, all the other Parts of the Structure being of the same Proportion in both.

These Animals couple near the Beginning of *June*, at which Time most Animals are proud with prolifick Seed. *Aristotle* in his *Hist. Animal. lib.* 5. *cap.* 8. says of the Spiders, That when the Female Spider has drawn out the Cobweb, the Male does the same; and after a Repetition of such mutual Services, they couple together Back to Back; this Way of Copulation being most convenient for them, by reason of the orbicular Form of their Bellies. But for my part I freely own, that Observation has not yet inform'd me whether they couple thus backwards, or Face to Face. If we dissect a *Tarantula* with young, we find in it an *Ovarium* compos'd of little Bladders full of little Eggs. These Eggs begin to be fecundated in the Beginning of Summer, at which Time the Belly of the *Tarantula* swells, as you see it in the third Figure, (for the second Figure represents a Male.) A few Days after the Impregnation it brings forth or lays a Bladder full of little Eggs, such as you see delineated in Figure 4.

This Bladder or Cluster of little Eggs is of a Sky-Colour, which distinguishes it from the *Ovarium* of Shell-Fish, the Colour of which is yellowish and shining. The *Tarantula* having thus laid the Bladder, imbraces it very close, as you see in *Fig.* 3. and continues so to do for 12, 15, or 20 Days; after which it leaves it in the Fields,

Fields, where the further Operation of the Sun brings the Eggs to such a State of Maturity as is requisite for their breaking forth. It lays its Eggs after the same Manner with the other Spiders, and its Bag lies near the Fundament; which *Aldrovandus* has likewise observ'd in his Book *de Insect. fol.* 625. *I observ'd* (says he) *in the Belly of a Spider a great Heap of Eggs, as small as Atoms, which were white, and gave a Crack when I pressed 'em with my Finger.*

A *Tarantula* is not impregnated till 'tis a Year or two old, at which time 'tis reckon'd to be of a Bigness proper for Generation. In the Time of Copulation and Impregnation, the Male and Female are very fond of one another, and thus they continue till the Female is just ready to lay; upon which the Male leaves her, notwithstanding that she lays several Bladders of Eggs all the Summer long.

This Bladder of Eggs resembles, in Figure and Magnitude, a Lupine; as you see it represented, *Fig.* 4. If you cut it up thro' the Middle, you'll find within it a vast Quantity of little Eggs, sometimes Hundreds and above; see *Fig.* 5. These little Eggs are rang'd in a regular Order, and mutually joyn'd by thin flaggy Threads, or rather by a peculiar sort of Slime. One of the Eggs a-part is as big as a Millet Seed, and sometimes as a White-Poppy Seed. They are every Way round, and their outer Membrane is very thin and friable, in the Cavity of which are contained the first Threads of the Spiders, which the further Influence of the Sun quickly brings to Light. From the first Laying of the Eggs to the perfect Exclusion, there's an Interval of several Days; sometimes 20, and sometimes 30 in the parch'd Soil of *Apulia*,

pulia, leſs or more, according as the *Tarantula* frequents the Plain or the mountainous Parts of the Country.

Now, that I am ſpeaking of the Eggs of Inſects, 'twill not be improper to put in a few Remarks of the Eggs of Oyſters, the Propagation of which is ſo little known among Philoſophers. Laſt *May* I made my Remarks on ſome Oyſters brought alive from *Naples* to *Rome*; and in viewing with a Microſcope, the Milk that floats in their Cavity, I found it to be nothing elſe but a Collection of very little Eggs, or of the minuteſt Oyſters ſwimming confuſedly in a ſlimy or reſinous ſort of Juice. If you ſpread this Milk upon a Glaſs, and hold it before a ſtrong Light, you'll obſerve with a Microſcope a ſort of ſwinging Motion, and a wandring Progreſs of the Parts of the Milk, as if ſuch Progreſſions were the firſt Rudiments of Motion of the future Animal. Modeſty will not ſuffer me to take notice of the very lively Motions, that a famous Phyſician of *Italy* has obſerved in the Seed of other Animals.

Milk new drawn from a She-Goat, and ſpread upon a Glaſs, repreſents under a Microſcope an infinite Quantity of very minute Globules, or little Balls, that move nimbly to and again; nay, I've obſerv'd this nimble Motion in theſe Globules two or three Days after 'twas milk'd, provided the Milk was not turn'd or corrupted: And if you add a little Water to the Milk, you will find the Motion yet more manifeſt. Theſe Remarks I made with a Microſcope of three Glaſſes, which was ſo contriv'd, as to have the thing to be view'd plac'd conveniently againſt the Light, and conſequently ſurvey'd with more Accuracy and Niceneſs.

To

To return to the Milk of Oyſters: I ſay, this Milk is nothing but a Collection of an infinite Number of little Eggs or Oyſters, ſwimming confuſedly in a ſlimy or reſinous Sort of Liquor. But I cannot gueſs at the Uſe of this whitiſh and ſlimy Glue interſpers'd among the Eggs, unleſs it be that the Author of Nature deſigned not only a quicker Maturation of the tender Brood of the Oyſters, by Virtue of a gentle and balſamick Moiſture, but likewiſe a firmer Adheſion of the ſame to the Rocks, when put forth by the Mother; to the end that they might be able to withſtand the Shocks of the Wind and the Sea, and attain to a due Growth by Vertue of the Firmneſs thus procur'd.

CHAP. V.

Of the Bitings of the Tarantula.

THE *Tarantula* is not venomous in every Country, nor in every Seaſon of the Year, but only in *Apulia*, and that in Summer, eſpecially about the *Dog-Days*. The Sting of it is not offenſive in Winter; and, which is ſtrange, the *Tarantula's* that haunt the very Mountains that border upon *Apulia*, do no harm, let 'em bite when they will. The nocive Sort are bred in the Fields of *Apulia*, and do Harm chiefly in Summer, by reaſon that their Poyſon is then exalted by the ſcorching Beams of the Sun, which makes 'em ſo mad and raging that they aſſault every one that comes near 'em: Nay they are not only offenſive to Men, but to other Animals: Which is likewiſe obſerved by

Ælianus, lib. 1. *cap.* 5. where he informs us that the *Tarantula's* are pernicious to Harts, and that Ivy is their only Remedy; insomuch, that they die if they do not eat of it in a very short time after they're hurt. The Inhabitants of *Apulia* are of Opinion, That their Wounds are most pernicious in the Season of Coition; that is, about the Beginning of Summer; upon the Plea that their Poyson is then exalted both by the venereal Rage and the Summer Sun, as 'tis commonly reported of other venomous Animals. But after all, their Stings are very venomous in the after Part of the Summer, as well as at the Time of their venereal Pride.

In that Part of *Apulia* which goes by the Name of *Bari*, the Reapers are frequently bit by 'em; for that Province being a very wide and pleasant Plain, covered with Wheat, with few or no Trees, is roasted and inflam'd as 'twere by the Beams of the Sun; the excessive Heat of which inspires the *Tarantula's* with a greater Rage, and makes 'em set upon the Reapers and Travellers with greater Fury. Particularly, the Reapers are very much expos'd to their Bites; for the *Tarantula's* making their Progress either upon the Nastyness of the Furrows, or upon the Stalks of the Wheat, fasten readily upon their Hands or Feet; and for that Reason, they are wont to wear Boots to guard off the Injury.

'Tis generally believ'd that a Viper does not bite but when 'tis provok'd; and accordingly we see some Mountebanks handle 'em without receiving any Injury, because they handle 'em dexterously and without Violence. Upon this Assertion Mr. *Charas* grounds his Opinion, That there is no Poyson hid in a Viper, but

that

that all the Force of the Venom lies in the Spirits of the Viper, their being inflam'd and inrag'd by external Violence; insomuch that when the Spirits, thus inflam'd and exalted to a virulent Temper, are mix'd with the Humors of Animals, they presently raise a fatal Storm of Symptoms. But the contrary being made out by the solid Experiments of my learned Friend Mr. *Rhedi*, I leave the Truth to be decided by impartial Judges.

Let better Heads judge, whether the same Question will lie upon the Venom of the *Tarantula:* This I know by my own Eyes, That a *Tarantula* attacks Persons asleep, as well as awake; and without any Provocation, as well as when 'tis irritated; and that in both Cases its Bites are venomous. When it bites, it throws out a small and scarce perceivable Quantity of Liquor; but indeed, I am yet to learn whether that Liquor is the Venom, or the Vehicle of inflam'd and venomous Spirits. 'Tis likewise manifest from the Experience of the *Apulians*, That not only their Bites, but even the Liquors in which they are stiffl'd, are capable to produce pernicious Effects. And this we find confirm'd by an Eye-Witness, namely, *Epiphanius Ferdinandus, cap.* 2. *observ.* 81. Now this overthrows the Opinion of the inflam'd Spirits, for all the Force of the Spirits is sunk in the Liquor; and therefore we conclude, That the Venom of the *Tarantula* is lodg'd in a more solid Subject.

The Bite of a *Tarantula* raises a Sense not unlike that of the Stinging of a Bee or an Ant. After the Part is bit, 'tis circumscrib'd with a little Circle of a livid, yellow, black, or some such Colour; a very violent Pain insues, and some-

sometimes instead of the Pain there's a Numness, and divers such like Symptoms, according to the various Colour and Magnitude of the *Tarantula*, the various Exaltation of the Venom, the various Constitution of the Patient, and such other Things; which cannot be set in a clearer Light, than by giving some Histories of Persons bit by 'em; which the Reader will meet with a little lower.

CHAP. VI.

A Description of the Diseases and Symptoms that ensue upon the Bite of the Tarantula.

THE Life of Man is always a Scene of Unhappiness, but 'tis yet unhappyer when 'tis teaz'd with Diseases, and unhappyest of all when plagu'd with Poyson. The Poyson of the *Tarantula* affords us a deplorable Instance of this Unhappyness; for such is the peculiar and uncommon Nature of this Venom, That when once it seizes the Body, it either kills the Patient out of hand, if Musick and a seasonable Use of Remedies does not immediately take place; or, when these are employ'd, makes such a deep Impression upon the Fluids of the Body, that it revives (as it were) every Year, and particularly in the three Months of Summer; and unless this anniversary Return be mitigated for the Time with Dancing and the other Antidotes, it keeps the Patient all that Year under an innumerable Train of grievous Disorders.

Commonly the *Tarantula* bites People when they

they are asleep, and not aware of 'em; but if the Person thus bit is awake, he feels such a Pinch as if he were stung by a Bee or an Ant. The Part affected is seiz'd sometimes with Pain, and sometimes with a great Numness; Immediately upon the Wound given, 'tis surrounded with a livid, black, or yellowish Circle; and soon after rises in a painful Swelling, which upon Recourse to Musick and the Use of Remedies, vanishes along with the other Symptoms.

A few Hours after the Bite, the Patient is seiz'd with a great Difficulty of Breathing, a heavy Anguish of Heart, and a prodigious Sadness; his Voice is sorrowful and querulous, and his Eyes disturb'd; and when he's ask'd by the By-standers where his Pain lies, he either makes no Answer at all, or points with his Hand to the Region of the Heart, as if that were most affected.

These Symptoms are most frequent upon the first Invasion of the Illness; but they are not perpetual, neither are they common to all Patients; nay, they are not produc'd by all *Tarantula's*; for the Symptoms vary pursuant to the Variety of the Nature of the *Tarantula*, the Constitution of the Patient, and the greater or lesser Violence of the Summer Heat. Accordingly, the *Apulians* observe that the *Tarantulæ* of the Northern Places of *Apulia* are worse, and occcasion more grievous Symptoms; and withal, that those who are bit by 'em, are pleas'd with several Colours, especially a red, green, blue, *&c.* but not a black; insomuch, that if the Attendants have Cloaths on of a Colour that's ungrateful to the Patient, they are obliged to retire out of their Sight; for upon seeing the Colour they dislike, they are presently sei-

zed

zed with an Anguish at Heart, and a Renewal of the Symptoms.

The Symptoms vary in pursuance of the Variety of the *Tarantula's*. The whitish *Tarantula* causes a slight Pain, follow'd by an Itching, a pricking Pain in the Belly, and a Looseness. The spotted *Tarantula* causeth a sharper Pain and Itching, and even Senseleſsness, Heaviness, Pain of the Head, Shivering of the whole Body, and the like. The blackish *Tarantula*, besides all the fore-mentioned evil Effects, is attended with a Swelling and grievous Pain in the Part that is stung, Cramps, Chillness, and a cold Sweat all over the Body, Speechleſsness, an Inclination to vomit, Extention of the Yard, Swelling of the Belly, and others to be spoken of afterwards.

Since of the numerous and almost incredible Symptoms of Persons stung by the *Tarantula*, many seem to flow from a depraved Imagination, 'twill be reasonable enough to assert, That this sort of Poyson, after the sharp Fit of the violent Symptoms, which appear for the first Days, is over, ends at last in a peculiar Kind of Melancholy; which continually hangs upon the sick Person, till by Dancing, or Singing, or Change of Age, those violent impressions are quite extirpated from the Blood and the Fluid of the Nerves; which very few have the Happiness to meet with: for 'tis certain let a Person be once stung, there's no Expectation of ever being perfectly cur'd.

This Assertion has for its Confirmation innumerable Symptoms which smell strong of a Disorder'd Fancy; for many of these Persons are never well but among Graves, and in solitary Places; and they'll lay themselves along on a

Bier,

Bier, as if they were really dead; they'll throw themſelves into a Pit, as if they were in Diſpair. Maids and Women, otherwiſe chaſt enough, without any Regard to Modeſty, fall a ſighing, howling, and into very indecent Motions, diſcovering their Nakedneſs; they love to be toſs'd to and again in the Air, and the like. There are ſome that will rowl themſelves in the Dirt like Swine, and are mightily pleas'd with the Exerciſe. Others again you cannot pleaſe, unleſs they be ſoundly drubb'd on the Breech, Heels, Feet, Back, *&c.* And there are ſome that take a great Pleaſure in Running.

There are alſo curious Obſervations made about Colours; ſome of which are very agreeable to thoſe Perſons, as others are offenſive to 'em; and according to the different Degree of Depravation in the Fancy, ſometimes they are refreſh'd or offended with one Colour, ſometimes with another.

CHAP. VII.

A farther Explication of the other Symptoms, and their Analogy with other Diſeaſes.

GEnerally ſpeaking the Symptoms of perſons ſtung with the *Tarantula*, upon the firſt Acceſſion of the Poiſon, are much like thoſe uſually obſerv'd in malignant Fevers, proceeding from Coagulation; ſuch as pains at the Heart, a difficulty of Breathing, a ſtrange irregularity and diſorder in the Pulſe, a ſudden and almoſt fatal failure of the animal and vital Actions. Of all theſe things, my honoured Father is an eye witneſs,

ness, who not many years ago at *Lecce* in *Apulia*, where he is a Physician of establish-ed Reputation, as every one knows, observ-ed that when three sick Persons were brought hither from the Country, sick of this malig-nant Fever, and having many Symptoms very like those that appear in Persons bit by the *Tarantula*, their Parents were of opinion that they were ac-tually stung; and therefore having sent for the musick (tho' my Father oppos'd it as much as he could, and assur'd them the distem-per was a malignant fever, proceeding from the Co-agulation of the Blood) the poor Patients at the instance and perswasion of their Parents, fell a dancing together. One of them very fairly danc'd himself off the Stage, and the other two did not stay long behind; Whence we collect, that this malignant Fever is very often mistaken by Physicians. As for the Poison of the *Tarantula*, if I am able to Judg of any thing, I am apt to be-lieve that this Poison has its principal seat in the Liquor of the Nerves, or the animal Spi-rits; For continual pains of the Head, Faint-ings, akeing of the Bones, unableness to move, pains of the Stomach, sickness at the Heart, and such like Symptoms abundantly discover the distemper'd state of the Spirits. But yet I would not exclude an antecedent virulent Disposi-tion of the Blood it self.

The principal Parts that seem to suffer most by this Poison, are the Stomach and Heart, (if by the Heart we may understand the Mass of Blood that circulates through it; for I have no mind to contend about the term) for they are seldom free from disorders of the Sto-mach, Qualms, Thirst, want of Appetite, An-guish at Heart, Convulsions, Heaviness, Pres-

sure

ſure in the Breaſt; whence they are always mourning, ſighing, pale and ſilent. And it's worth the while to remark, that many of our Country Women in the *Greenſickneſs*, have had almoſt the ſame Symptoms, with thoſe that appear in Perſons poiſon'd by the *Tarantula*; and becauſe they have been ſuppos'd to be really infected, they have taken up a cuſtom of Dancing every year, and by this means have had the good luck to rid themſelves altogether of that Diſtemper, and the frequent Fits of the Mother: In regard this Exerciſe has remov'd theſe and ſeveral ſuch Diſtempers through Sweating, we may hence draw a practical Aphoriſm, that ſuch Diſtempers of Women will never be more reaſonably cured, than by ſtrenghtning Medicaments that may exalt the waſted and languid Maſs of Blood, and not by Purgatives, Saccharates, and the like; which do but weaken it the more. Amongſt the principal Corroboratives, which ſerve to repair the waſted Maſs of Blood in Chronical Deſeaſes, I nightily eſteem riding out every day in the country Air, eſpecially in the morning, by which I have perfectly cured ſome that were almoſt incurable. Theſe things I have taken notice of by the Bye, concerning Dancing and Rideing, to make it evident how much Exerciſe ſerves to ſtrengthen and refreſh the ſpriteleſs Maſs of Blood in Chronical Caſes, when all other kind of Remedies are to no purpoſe, eſpecially if the Diſtemper has its Riſe from any Trouble in the Mind: But Rideing is preferrable to all the reſt; for the whole force of that jogging Motion terminates downward in the Bottom of the Belly, where a Fermentation is rais'd, by which the ſtagnating Matter recovers its loſt Circulation.

Here

Here it must not be conceal'd, that tho' in our Country there is really such a Thing as the Poyson of the *Tarantula*, and Persons infected with it, yet Women, that make up a great Part of that Number, very frequently counterfeit it under the Masque of its usual Symptoms; for, whether they be under the Power of Love, or have lost their Fortunes, or meet with any of those Evils that are peculiar to Women, they never leave poreing upon the mournful Object, till they run into Dispair, or down-right Melancholy, or at least are upon the Borders of it; and then they are also under a Disadvantage of Living a solitary sort of Life, like that of Nuns, deny'd the Benefit of free Converse with Men, though never so fair and honest. Besides all this, the Climate is sultry, their Constitution is of the same Nature, their Food hot and very nourishing, and their Life easie. Partly from the former, and partly from the latter of these Causes, 'tis no rare thing with them to turn mopish and melancholy: No Wonder then if they be mightily delighted with Variety of Musick and Dancing, whence they feign themselves to be stung by the *Tarantula*, on purpose to enjoy the agreeable Diversion of Musick, which is only allow'd to such Persons; and then the Sham passes the better, for that the Pretext is accompany'd with a real Paleness of Face, Sadness, Difficulty of Breathing, Sorrow of Heart, a depraved Imagination, and the other Symptoms of the pretended, rather than true Poyson of the *Tarantula*. In fine, the musical Entertainment of this Country is so very agreeable to the Women, that 'tis a Proverb with us, *Il' Carnevaletto delle Donne*. But tho Women counterfeit this Distemper sometimes; we must not therefore imagine that

all

all others do the same, for there are some persons, otherwise both Learned and Religious, who not being satisfied of this upon the credit of Persons that were stung, have made the experiment upon themselves, and coming into *Apulia*, have been brought into such imminent danger by being stung themselves, that thay have confessed, unless the Musick had been ready at hand, their lives would have gone for't. The same is asserted by our *Epiphanius* in the forecited place.

The venomous *Tarantula*, as we said before, is found no where, but in *Apulia*, and there especially in the plain Fields; for such as are found in the neighbouring *Mountains*, are either without Venom, or if they have any, it is not so pernicious: and if one of the *Tarantula*'s which Frequent the plain Fields be removed into others Countries, as to *Naples* or to *Rome*, a Person may be stung by it without receiving any hurt at all; at least the evil Effects are few and inconsiderable, as will be shewn in the following Relations. Some there are who affirm, That such as are poison'd by the *Tarantula*, labour under the evil effect of the Venom, so long as the Spider lives; but this is an idle Story, and contradicts the infallible Experience of the People of our Country, so that I need not spend time to refute it.

Not only the *Tarantulæ*, but also the *Scorpions* of *Apulia* are venomous; for the Sting of the latter is observ'd to produce almost the same Symptoms as the Poison of the former: those that are stung by them delighting themselves in Musick and Dancing, are cured by the very same means only, as I shall shew afterwards. For this reason many of the old Greeks,

and our Country-Men too have been of Opinion, that all thoſe Symptoms which are commonly aſcribed to the *Tarantula*, do principally proceed from the ſting of *Scorpions*; but as this is alſo againſt the ſtanding Experience of our Country, I ſhall therefore now lay down this for a certain Truth, That the *Tarantula* and *Scorpion* of *Apulia* are both of 'em moſt venomous, and produce almoſt the ſame Symptoms, and are cured by the ſame Means, that is, by Muſick and Dancing, and the like. The *Scorpions* however are not ſo virulent, as thoſe of *Africa*, but more than they are in any other part of *Italy*.

There are ſome that die in a very few days after they are ſtung by the *Tarantula*, the uſual Remedies being of no advantage to them at all: Others again are recovered from imminent Death by the ſaid Means. But the Seeds of the Poiſons give the humours of the Body ſo deep a tincture (which is not uſual in other Poiſons) that there is ſcarce any poſſibility of utterly extirpating them, ſo that they ſeldom fail of accompanying the Patient to the very Grave; and as I always ſaid, whereever this Poiſon enters, it makes an indelible Impreſſion.

It is a peice of Curioſity to ſearch into the Period and Revival of Poiſons. The Poiſon of a Dog has been ſometimes obſerv'd to cleave to the Maſs of Blood for thirty years, and having its ſtated Seaſons of recovering its Vigour, has continued to the very death of the Perſon infected. Upon this Subject it will be worth while to read *Hildanus*'s Hiſtory *Cent.* 1. *Ob.* 86. concerning a Matron, who being bit by a mad dog, found the poiſon renew'd its Vigour every ſeven years, for almoſt thirty

years

together, till at length she dyed. 'Tis commonly believed, that if the Poison of a Dog keeps undiscovered for 40 days together, it will never appear any more; but this appears to be false from the forementioned History; and I my self did see at *Rome* this very year 1695. an Apothecary, who being bit by a Dog in the month of *June* this same year, when he was at *Urbino* the place of his nativity, and having afterwards come to *Rome*, was on a sudden taken with the Distemper that's usual in such Cases, and in two days after dy'd about the midle of *October* last past. The same thing has been observ'd in a young Physician by the Celebrated *Luccas Tozzius*, who is at present Physician to the Pope, as he was lately pleased very freely to tell me. *Fracastorius lib. 2. de morb. contag.* says. I my self have seen a Boy, who eight Months after he was bit by a Dog, discovered the Contagion, of which he presently dy'd. The Impressions of the venereal Distemper stick to the Blood for 30 years together and better, without any trouble or injury to the Patients Health; but then there is as vigorous a return of the Symptoms as if it were upon the first Onset. The Poison of the *Tarantula* renews it self infallibly every year, especially about the same time when the Patient receiv'd it.

When the Heat of the Sun begins to be violent and Scorching, which happens about the beginning of *July* and *August*, such as are infected with the Poison of the *Tarantula*, sensibly perceive it renewing it self by degrees, and discovering it self by want of Appetite, sickness at Heart, heaviness of the Head, Thirst, pain in the Bones as if they were broken, and such like, which sometimes come

gradually, and sometimes all on a suddain, casting the Patient into a violent Fit. If the Patients are aware of the gradual Advancement of of the Symptoms, they presently have Recourse to the Musical Entertainment, to prevent their being taken with a suddain Fit: But if it comes upon them unawares, without the previous Symptoms, then, like Persons struck with Thunder, they fall down upon the Ground half dead, the Hands, Face, and other remote Parts of the Body turning black, the Breath almost quite stopp'd; and in this Condition they lye till the Musicians come, by whose wonted Tunes they begin to recover by little and little, and to be prepared for the Dance; moving first their Limbs, and then the whole Body.

If the Patient happens to loose the Season of Dancing, then will he be under very grievous Symptoms all that Year; such as a jaundice Colour in his Skin, Sickness at Heart, Want of Appetite, a Slight Fever, and the rest of them which we have already mention'd over and over. Further, if he eats any Weather-Mutton, Cucumbers, or Citruls, he is presently seiz'd with a grievous Pain at the Stomach: But then if he makes use every Year of the Season for Dancing, and by Sweating and the Sound of the Musick throw out the Seeds of the Poyson, he holds very well all that Year, and is not liable to any of the fore-mention'd Symptoms.

CHAP.

CHAP. VIII.

Of the Cure of the Sting of the Tarantula, *and of the evil Effects it produceth.*

WHoever happens to be infected with any ſort of Poiſon, is thereby brought into great danger; and much more they that are ſtung by the *Tarantula* or *Scorpion* of *Apulia*, many of whom die quickly in the ſpace of an hour, the uſual Remedies being of no advantage.

The Effects of Poiſon are generally reduced by Phyſicians to two kinds, *viz*, Coagulation, and Diſſolution of the Maſs of Blood. Any one may infer from the Symptoms that have been so often repeated, that the Poiſon of the *Tarantula* has a tendency in it to curdle or thicken the Blood, and there needs no farther evidence of that, than the ſudden Oppreſſion of the Pulſe, Anguiſh at Heart, great difficulty of Breathing, Blackneſs of the Face and other extream Parts, Chilneſs and a ſhivering all over the Body, deep Sleep and ſuch like, which indeed are various according to the nature of the *Tarantula*, or Conſtitution of the Patient, and ſome antecedent indiſpoſition of the Body, as the Summer is more or leſs hot and the like. When any one is bit by the *Tarantula* or Scorpion of *Apulia*, the Cure is perform'd by diſſolving and attenuating the poison'd Humors of the Body, by *Alexipharmacks*, *Theriacks*, *Bezoardicks*, and other Remedies differing but little from thoſe that Phyſicians commonly uſe in the Caſe of Perſons ſtung by Vipers. With us they ſcarrifie the Place that is bit with a Lancet, and ſometimes is ſo

void of Senſe, that the Patient feels no Pain while the Inciſion is a making. When this is done, they apply a Cupping Glaſs to extract the Venom; then they chafe the Part with Treacle and bruis'd Garlick, and ſometimes with Mithridate, or Confection of Orvietan, till the Poyſon is in ſome Meaſure weakned.

For my part (if ever I may have my own Will in this Matter) I ſhould forthwith ſear the Place that's bit, with a red-hot Iron: For as Fire is a moſt eager Stimulative, it ſerves to ſhog the Fibres of the Part affected, and ſucceſſively the whole Frame of Fibres in a human Body; or to give them a quick, continued, and vehement Motion; by which Means the adjacent Humours are looſened and mov'd to and again, attenuated, and ſcarce ever ſuffered to be fix'd by the coagulating Venom; eſpecially in the Part affected, where the Fire is more pungent, and the Humors more inclin'd to curdle. But becauſe I never yet made Tryal of thoſe happy Effects of Fire, nor receiv'd their Confirmation from other Authors, I ſhall wave for the preſent any farther Encomiums upon them; however 'twill not be amiſs to take notice of the Effects of Fire in other Diſeaſes. I have often obſerv'd, That Searing with a hot Iron in the Beginning of Gangrenes or foul Ulcers, has had very ill Effects; for the Scar that the unſeaſonable Searing produc'd, quite ſtop'd and ſhut up the Fibres and Veſſels that lay open before: So that the neceſſary Evacuation of the Corroſive and Gangrenous Humor being thereby hindred, no Wonder that the noxious Humor of the Ulcer, retiring farther inwards, according to the Difference of the Parts in which 'twas lodg'd, produced various and dreadful Symptoms; nay more

than

than this, the ſeared Part has been quite dry'd up and grown black; and after a Number of Evils, in the Compaſs of a very few Days, has terminated in the Death of the Patient: As I have ſeveral Times obſerv'd at *Padua*, and other Hoſpitals of *Italy*.

When therefore ſuch Ulcers are to be cured, which may be ſuſpected of Malignity, and have a very corroſive Humour in them, Recourſe muſt not preſently be had to hot Irons and Cauſticks; but let care be taken, in the firſt Place, to foment them with Balſamick Decoctions, Vulneraries, and the like; by which the corroſive Humor is drawn outwards, the feeble and waſted Fibres are reſtor'd, and the Humors circulating through the Place affected receive a Balſamick Sweetneſs and Strength. And here I am free to ſay, That if laying aſide Ointments and the oily Remedies of ordinary Phyſicians, thoſe vulnerary and Balſamick Decoctions are us'd inwardly and outwardly, and the malignant and gangrenous Ulcers be at the firſt manag'd in this Method patiently and aſſiduouſly, they will not only be cur'd in a little Time, but will ſcarce ever corrupt again or grow incurable. But if theſe Remedies are of no Service, and the Ulcer is obſerv'd to grow contagious and feeding, in theſe two Caſes only Recourſe muſt be had to Burning and Cauſticks, and at length to the cutting off of the Member if there be great Fear of a Gangrene. After the Ulcer is ſeared, care muſt be taken that the Scar falls off as ſoon as poſſible; leſt the Mouths of the Veſſels being thereby ſhut, ſhould hinder the Eruption of the malignant Humor; as I obſerv'd but now. Beſmear the Part with the Juice of Parſly, and 'twill ſoon

throw off the Scar. If upon the Place that is ſear'd be blown the Flower of Wheat Meal reduc'd to as fine an Alochol as poſſible, and thereupon be apply'd a Pledget moiſtned in black Wine, and left upon the Ulcer for the ſpace of one Day, after which 'tis to be fomented with Linſeed-Oyl, then alſo the Eſcar will fall off; I have ſeen at *Padua*, when the Cure was perform'd by D. *Marchetti*.

But to return into our Way from this Diverſion: After the Phyſicians of our Country have thus ſcarify'd the Part bit by the *Tarantula*, and ply'd it with *Alexipharmacks*, then they have Recourſe to inward Remedies; amongſt which, the principal are the Spirit of Wine, diſtill'd with Roſemary, or *Hungary*-Water; or rather, the very Eſſence of Roſemary, diſtill'd by it ſelf, and taken with Treacle-Water, or the Water of Citron Rind, or Hyſop, Parſly, wild Thyme, *&c.* There may therefore preſently be given the ſaid Spirit of Wine tinctured with Roſemary, from one Ounce to two, with Thyme-Water, or with the Decoction of preſervative Herbs, and the Patient muſt be well cover'd in a Bed, to bring him to a Sweat; and that he may more eaſily fall into it, a linnen Cloth, moiſtned with the Spirit of Wine, and (after it has been ſlightly warm'd) wrapp'd about his naked Body is commended as very uſeful. *Epiphanius Ferdinandus*, in his Obſervations, propoſes the following Electuary, which he calls an *Antiphalangium*, as very uſeful, and what he has made Tryal of, *viz. Take of Myrtle Berries, and Tamarisk Wood, of each an Ounce; Seeds of Parſnips, black Coriander, Chaſt Tree, Carrots, Aniſe, Cummin, and Origanum, of each a Dram; Seall'd-Earth, and Oriental Bole-Armoniack, of each*

two

two Drams; with Syrup of the whole Citron, make an Electuary; of which take two Drams every Day in the Morning, drinking above it the Decoction of Alexpharmacal Herbs and Roots: But in earneſt theſe or any other Remedies that can be propos'd, are to little or no purpoſe, unleſs the Muſick be preſently us'd, as is well known by the conſtant and infallible Experience of thoſe Parts of the Country: This muſt be own'd to be the principal Antidote againſt the Poyſon of the *Tarantula*; and when once that is heard, the Patients, tho' they lay before as if they had been taken with an Apoplexy, begin by Degrees to move firſt their Hands and Feet, and afterwards the other Parts of the Body, till at laſt they fall a howling, ſighing, uttering obſcene Expreſſions, and dance for three Days together. But of theſe ſingly.

CHAP. IX.

Dancing and Muſick are the principal Antidote for this Poiſon; where, by the way, a Deſcription is given of the Manner of Dancing ſo uſual in Apulia.

BEcauſe thoſe that are ſtung by the *Tarantula* dye in a little Time without the preſent Aſſiſtance of Muſick, all other Remedies giving no Relief, it will not be amiſs to give ſome Account of the Manner of Dancing that is ſo uſual with us.

When any are ſtung, ſhortly after it, they fall down upon the Ground half dead, their Strength and Senſes going quite from them. Sometimes they breath with a great deal of difficulty,

culty, and ſometimes they ſigh pitiouſly, but frequently they lye without any Manner of Motion, as if they were quite dead. Upon the firſt ſounding of the Muſick the fore-mention'd Symptoms begin ſlowly to abate, the Patient begins to move his Fingers, Hands, Feet, and ſucceſſively all the Parts of the Body; and as the Muſick encreaſes, their Motion is accelerated, and if he was lying upon the Ground, up he gets, (as in a Fury) falls a Dancing, Sighing, and into a thouſand mimick Geſtures. Theſe firſt and violent Motions continue for ſeveral Hours, commonly for two or three; after a little Breathing in a Bed, where he is laid to carry off the Sweat, and that he may pick up a little Strength, to work he goes again, with as much Eagerneſs as he did before, and every Day ſpends almoſt 12 Hours by the Clock in repeated Dancing; and, which is truly wonderful, ſo far is he from being wearied or ſpent by this vehement Exerciſe, that (as they ſay) it makes him more ſprightly and ſtrong.

They frequently begin to dance about Sun-Riſing, and ſome continue in it without Intermiſſion till towards Eleven in the Fore-noon: There are, however, ſome Stops made; not from any Wearineſs, but becauſe they obſerve the muſical Inſtruments to be out of Tune; upon the Diſcovery of which, one would not believe what vehement Sighings and Anguiſh at Heart they are ſeiz'd with; and in this Caſe, they continue till the Inſtrument is got into Tune again, and the Dance renew'd; and 'tis ſtrange, That poor country Girls and Boys, that perhaps in all their Lives never ſo much as ſet their Eyes upon any of the better ſort of muſical Inſtruments, ſhould upon this

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occaſion become ſo able Judges of the Tunableneſs or Untunableneſs of 'em.

About Noon the Exerciſe ceaſes, and they are cover'd up in a Bed to force out the Sweat; when this is done, and the Sweat wiped off, they are refreſh'd with broth, or ſome ſuch light Food, for their extraordinary want of Appetite will not allow them to feed higher; about one a Clock after Noon, or two at fartheſt, they renew the Exerciſe as before, and continue it in the Manner above mention'd till the Evening; then to Bed they go again for another Sweat; when that's over, and they have got a little Refreſhment, they lay themſelves to ſleep. This Way of Dancing commonly holds four Days, it ſeldom reaches to the ſixth.

The Space of time for Dancing is not generally certain, for there are many that continue it till they find themſelves freed of all the Symptoms, which very frequently happens after the third or fourth Day; for then the Maſs of Blood being clear'd from the virulent Parts by repeated Sweats, the Patient enjoys the Benefit of Health as before, and all that Year is free from the ill Symptoms of that Diſtemper. But tho' the venomous Seeds of the Diſeaſe are remov'd from the Blood by Sweats, which this Exerciſe procures, it does not therefore follow that thoſe which are produced by the common Diaphoreticks, will have the ſame Effect: For when ſeveral of our Phyſicians have ſet aſide the Dancing, and brought the Patient to a Sweat by Diaphoretick Waters and Confections, ſome Days before it was ſuppos'd the Fit wou'd come upon him, it has come nevertheleſs, and that with greater Eagerneſs; ſo that they have been forc'd to repair to the Dance, and by

frequent

frequent Sweats this procur'd Way to turn off the Fit.

About the ſame Time of the Year that the Patient was ſtung, the grievous Symptoms of this Diſtemper make their Return; ſo that if any are not quick enough to get before hand with the Deſtemper, by having Recourſe to the Dances, the Fit comes upon them unawares; and wherever it finds them, down they fall, as if ſeized with an Apoplexy, and become ſpeechleſs, the Face and Extermities of the Body turning black, *&c.* Upon the Notice of this, their Relations preſently ſend for the Muſick, upon the Hearing of which they begin by little and little to come to themſelves; and moving themſelves, as was ſaid before, get up and fall a Dancing: And, as I alſo took notice already, if the Seaſon for Dancing is ſlip'd, and the Advantage of Sweating procur'd by that Means loſt, the Patient muſt expect to be ſeverely afflicted all that Year, by Want of Appetite, a jaundice Colour in his Skin, Wearyneſs all over the Body, and the other fore-mentioned Evils; which grow yet worſe and worſe, if he neglects the following Years alſo to dance; till at length he falls into an ill Habit of Body, Dropſie, and other incurable Diſeaſes.

I will here ſubjoyn ſome Curioſities, obſerv'd in thoſe Perſons in the Time of Danceing. In this vigorous Exerciſe they generally ſigh, make heavy Complaints, and (like Perſons in Drink) almoſt quite loſe the right Uſe of their Underſtanding and Senſes. Their Parents, and other By-ſtanders receive the ſame Treatment from them; and they ſcarce remember any thing that's paſt. Yet there are ſome of them that, during the Exerciſe of Dancing, are mightily

mightily pleas'd with the green Boughs of Vines or Reeds, and wave them about in their Hands in the Air, or dip them in the Water, or bind them about their Face and Neck, and even plunge their Hands and Faces into the Water. There are others of them that love to be handling red Cloaths, and naked Swords. Hereupon the Common-People have taken up a prevalent Opinion, That ſuch of 'em as love to dance with green Vine-Branches in their Hands, have been ſtung by the *Tarantula*; and that, on the other hand, ſuch as love red Cloaths and the naked Sword, have been ſtung by the Scorpion; the Truth of which I leave undetermin'd. Others again, when there is a little Intermiſſion of the Dancing, fall a digging of Holes in the Ground, which they fill with Water, and then take a ſtrange Satisfaction in rowling themſelves in them like Swine: Laſtly, when they begin to dance, ſometimes they call for Swords, and there they act the Fencer flouriſhing as they dance; ſometimes they are for a Looking-glaſs, but then the Sight of themſelves fetches up many a deep Sigh. Sometimes their Fancy leads them to rich Cloaths, curious Veſts and Necklaces, and ſuch like Ornaments, and then they are highly courteous to the By-ſtanders that will gratifie them with any of theſe Things; they lay them very orderly about the Place where the Exerciſe is perform'd, and in Dancing pleaſe themſelves with one or other of them by Turns, as their troubled Imagination directs them. They are moſt delighted with Cloaths of a gay Colour, for the moſt part red, green, and yellow: On the other Hand, they cannot endure black, the very Sight of it ſets

them

them a sighing; and if any of those that stand about them are clad in that Colour, they are ready to beat them and bid them be gon.

CHAP. X.

Some other Things belonging to this Exercise are briefly consider'd.

AS the *Tarantula*'s are of different sizes, colours and virulency, so the Persons stung by them are delighted and moved to dance by different kinds of Sounds, according to the difference of the *Tarantula* that infected them. Nay, every Patient has not only his particular Tune, but also his particular Instrument: Some a Pastoral Pipe, others a little Drum, Cittern, Harp, Timbrel, Violins, and Pipes of several Sorts. Here 'tis remarkable that sometimes the Musicians will tune three or four different Sorts of Sounds without having the least Effect upon the Patient: But when they fall into a Tune that's accomodated to the Poison they presently receive the benefit of it. However this must be taken for a Truth, that how much so ever they vary in their particular Tunes; yet they all agree in this, To have the Notes run over with the greatest quickness imaginable (which quickness of Sound is commonly call'd *Tarantella.)* And therefore the Players, that have not their Lesson to learn in these Matters, easily discover the cheat of the Women: for if they find that they presently take any Motions, and jog on indifferently, without any regard to the swiftness, slowness, or other difference

rence of Sounds they give to underſtand, that the honeſt Woman is but in jeſt, and afterwards Experience puts the matter out of doubt.

This is what I had ſhortly to remark concerning the way of Dancing, and the Effects of it. It remains now to examine, Whether Muſick has ſo much influence upon the *Tarantula* it ſelf, as to put it upon dancing, and whether other Animals that are ſtung by it neceſſarily dance.

That the *Tarantula* it ſelf does dance at the Sound of Muſick, is what ſome have believed; as *Kircherus Mund. Magnet. lib.* 13. *part* 8. and other Authors, who have judged upon the Credit of others rather than from what they themſelves have ſeen. But from what has been already ſaid we muſt know, that the *Tarantula* is a ſort of Spider or a eight-ey'd *Phalangium*, the ſubſtance of which is almoſt all brittle, membrannous, and moſt ſubtile, filled with a peculiar ſort of nutritious Lympha (for I ſeldom or never obſerv'd any appearance of Blood in it) ſo that it is no wonder if the ſlighteſt motion from without cauſes Involuntary Throws.

But beſides this, it is in the very nature of the Inſect to be inclin'd to Leaping and other vehement Motions, and it has ſcarce ever been obſerv'd to reſt; and farther, the extraordinary heat of the Summer adds to this, and by exalting and attenuating its Humours, hightens the Motion. I have ſeen the Leg of the *Tarantula* pull'd off, dance for almoſt two hours together. There is yet a third Cauſe, and that is the undulatory or wavering Motion of the Air, which being ſtruck pretty ſharply by the Muſical Inſtruments, and terminating upon the membranous Body of the Inſect, makes it not

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at all ſtrange, if it ſeem to move at the ſound of the Muſick, altho that dancing proceed from theſe external Motions, rather than any pleaſure or natural inſtinct inclining it to move ſo upon that occaſion, all which will be more evident to any that ſhall read a Treatiſe of the force of Percuſſion, publiſh'd not many years ago by the celebrated *Borelli* (a great Ornament of the Academies of *Naples* and *Rome*) wherein many Secrets of the Power of Impulſe are examin'd. But tho this is my own Mind in the Caſe, yet I don't obſtinately deny its dancing from a natural Inſtinct alſo, eſpecially as we have the word of the fore-cited *Epiphanius* for it, and of ſeveral other Eye-witneſſes; only I think the matter needs a little further Proof.

We are now to enquire whether the other Animals, being ſtung by this Inſect, is inclin'd to dance as well as Man. With us the Affirmative is generally held, and I have often heard it from Eye-witneſſes. *Sennertus* alſo, *lib.* 1. *cap.* 7. from *Epiphanius* his Obſervations tells us that a Waſp being ſtung by the *Tarantula* fell a dancing together with it at the ſound of Muſick, and that a Cock happening to be in the way, was by the ſame means brought in for Company. Whether other Animals that are ſtung by the *Tarantula*, are put upon that dancing Motion from the ſame Cauſes, which we have obſerv'd but now to have that effect upon the *Tarantula* it ſelf, is what I queſtion very much; yet I confeſs that as thoſe that are bit by a mad Dog will howl and in other reſpects act like Dogs, which proceeds perhaps from the Impreſſions of certain Ideas of the mad Dog upon the Poiſon, and conveyed along with it, ſo if the Inſtinct

and

and Inclinations of that little Creature are latent in its moſt active Poiſon, and be thereby communicated to other Animals, it is no great wonder if they exert their whole Power in them, and that in a way very agreeable to the nature of the Inſect.

About ten years ago, when I was practiſing at Naples in that fam'd Emporium both of Learned Men and Sciences, a Friend of mine was at the pains to bring thither ſome of theſe Inſects alive from *Apulia*, about the Month of *Auguſt*. One of them we firſt irritated by ſtriking it ſlightly, and then ſet before it the Head of a live Coney, the upper Lip of which in a little time it ſtung in two places. Two hours after this, the Lips ſwel'd remarkably, and grew black, and the Coney it ſelf being taken with a ſtrange difficulty of Breathing, the Hair at the ſame time ſtanding ſtraight all the Body over, fell down to the ground. 'Till the fourth day it took neither Meat nor Drink, but lying ſenſleſs, and being much oppreſſed by the foremention'd Symptoms, the fifth day about Noon it dy'd.

Before its death, the Head, Lips and Tongue were grievouſly ſwell'd; ay, and the Abdomen too; and tho' the Muſician came, and us'd great variety of Tunes, yet it had no effect upon the Coney, which ſtill lay quiet, and without motion. It is therefore probable that that Poyſon does not produce the ſtrange effects of Dancing any where but in *Apulia*, where by the ſcorching Heat of the Sun it is exalted to its due height, and not in other Parts that lie perhaps under a colder Climate. I purpoſed, upon my return to *Lecce*, to make ſome Experiments in Animals by the Sting of the *Tarantula*; but as

I had ſcarce got home before I was to travel into foreign Countries, I cou'd do nothing at all in that matter.

When the Body of the Coney was open'd, we found the Veins and Arteries of the Brain ſwell'd up, and the Brain it ſelf a little inflam'd and ſet about with blackiſh Spots here and there. The Lungs and other Entrails were diſtended with clotted and black Blood. In the Ventricles of the Heart were obſerv'd greater Clotts of Blood, and ſmall Branches of a Polypous Concretion; there was abundance of Serum lying about the outward parts of the Brain. The other Parts were all ſound and untainted.

There is nothing more frequent in the opening of Bodies, than to meet with extravaſated Serum in the Parts and Cavities of it. But I have obſerv'd it eſpecially in the Bodies of ſuch as have dy'd through a general Coagulation of the Blood, or rather a particular one, there being an Obſtruction in ſome of the Bowels. By General, I mean that which is in malignant Fevers proceeding from Coagulation; by Particular, that in the Apoplexy, ſeveral Diſeaſes of Lungs, Obſtructions of the Entrails, and hard Swellings. Whence we very often find in Perſons that die of an Apoplexy, abundance of Serum ſwimming both without and within the Brain. In ſuch as die of diſtemper'd Lungs, it is found in the Cavities of the Breaſt, and ſo on: And this diſlodging of the Serum is rather to be reckoned amongſt the Effects than Cauſes of the principal Diſeaſe, in as much as it diſcovers it ſelf but a few days or months before Death. Which I have principally obſerv'd in ſuch as die of a Polypus in the Heart, who a little before death begin to be afflicted with an

œdematous

œdematous Swelling of the Feet, then turn hectical, and at last fall into a Dropsy. To this agrees what I have observ'd concerning the Asthma, and other Pectoral Diseases, in which there is some Obstruction in the Right Auricle or Right Ventricle of the Heart, as a Dilatation, Aneurism, Polypus, Ossification, and the like, which hinder the Blood from discharging it self out of the Right Ventricle of the Heart into the Lungs. In these Distempers I have observ'd a Tumor in the outer part of the Right Hand, coming on gradually, of a natural Colour, or somewhat pale; which, upon the hastening of the Distemper to produce its fatal Effect, has been raised higher, and expanded it self through the whole Arm. Whenever therefore any one shall take notice of this Tumor in the back, and soon after in the hollow of the Hand, and that it is attended with a difficulty of Breathing, he may be bold to assert that there is some Obstruction about the Right Ventricle of the Heart, or its Auricle, as will appear more evidently upon the Dissection of the Corps.

CHAP. XI.

Several Histories of Persons stung with the Tarantula.

HISTORY I.

IN the Year 1689. a Noble Woman of *Lecce* returning out of the Country to the City, stept aside into a Wine Cellar, whence after a little stay there, she returned home, and as

ſhe was employing her ſelf about her Houſhold Affairs, felt ſomewhat like the Bite of an Emmet in her Right Thigh. In the mean time not regarding ſo ſlight a matter, ſhe went to dinner, but ſhe had ſcarce begun to eat, before her Thigh and other inferior Parts were gradually ſeized with a Numbneſs, ſo that ſhe was not ſenſible of any twitching. Hereupon ſhe leaves her Dinner, retires to her Chamber to look to her Thigh, and found in the place that was bit a ſmall Tumor, about the bigneſs of a Pea, of a dark reddiſh colour, and ſomewhat inclining to blew. Forthwith ſhe apply'd to it Treacle and bruiſed Garlick mix'd together, and at the ſame time found her ſelf taken with a violent Anguiſh at Heart, and great difficulty of Breathing; a little after, being got to bed, there came upon her an univerſal Trembling, and that with ſuch violence, that two robuſt Men could ſcarce hold her: not long after ſhe was taken with a grievous Pain in her Joints and Toes, and ſo great was her Pain that ſhe could hardly bear the weight of a ſlight Linnen Smock that was put upon her. The Phyſician being call'd, lanc'd the Part affected ſeveral ways, and then apply'd to it Treacle and bruiſed Garlick mix'd together, and gave inwardly Confection of Alkermes with generous Wine, but all to no purpoſe; for loſs of Speech and difficulty of Breathing increas'd upon her, and ſhe found, ſhe ſaid, her Tongue ſo pull'd in, that ſhe could not get her Words pronounc'd. All theſe happen'd in the compaſs of three hours after ſhe was bit, and to theſe were added a great Thirſtineſs, want of Sleep, Pain at Heart, Loſs of Appetite, and many other Symptoms. Whence her Parents began to ſuſpect there might be ſomething of the Sting

of

of the *Tarantula* in the Caſe (tho they found it not in the Place affected) and thereupon advis'd the Patient to dance; but with Tears running down, ſhe told them, that the Pain of her Joints, and the total loſs of Strength made it impoſſible for her to do that.

But the Diſeaſe growing ſtill more violent, the Muſicians were ſent for, who ſtanding by the Bed-ſide, ask'd the Patient what was the Colour and Size of the *Tarantula* that ſtung her, that ſo they might fall upon the Tune that was peculiar to it; and when ſhe made anſwer, that ſhe could not tell whether ſhe was ſtung by the *Tarantula* or Scorpion; they play'd at a venture two or three different kind of Tunes, which had no manner of effect upon her; but upon the hearing of a fourth different from the other, ſhe began to ſigh, and not being able to moderate the moſt vehement Impulſes raiſed in her by the Muſick, without any regard to Modeſty, ſprung out of Bed almoſt quite naked, fell a dancing with great eagerneſs, and ſo continuing for three days in the uſual Method, was freed from all the Symptoms. But tho the Patient kept very well all that Year, yet every Year after, eſpecially about the time of her being ſtung, the Symptoms are renew'd, and there is a Pain, Tumor, and reddiſh Colour in the Place that was ſtung; but then theſe are all remov'd by the Dancings we have already deſcrib'd.

HISTORY II.

Another Lady alſo of the ſame City happening to be ſtung by the *Tarantula*, was taken with the ſame Symptoms, more or leſs violent; but by

dancing according to the Custom of the Country, turn'd them off, and was very well all that Year. But every Year after, about the wonted revival of the Poyson, her Toes were seiz'd with a most violent Pain, by which they were inflam'd, and by the falling down of the Inflammation, there flow'd out at the Nails a thin and most sharp waterish Humour, that grievously ulcerated the adjacent Parts. Upon these accounts the Lady being oblig'd to dance, after the Exercise was over, found her self presently cur'd of the foremention'd Symptoms of her Toes and whole Body, and even the Nails of her even fell quite off.

HISTORY III.

An old Man of about 70 Years, and of a pretty strong Constitution, born in the City of *Nardo* near *Lecca*, towards the beginning of the Month of *July*, laid himself to sleep in the Fields, and particularly in a Corn-Yard about Mid-day; he happen'd suddenly to be stung with a slender Prick, upon which he wak'd and clapt his Hand hard upon the place that was stung; afterwards baring his Thigh, he found a black Scorpion lying dead by the Part affected. A little after he was taken with a heavy Anguish at Heart, an universal Faintness, Pressure in the Breast, Weakness in the Head, and other Symptoms. The Disease was so far from abating through the means that were us'd both inwardly and outwardly, that all grew worse; and the Patient being kept fast a bed, clapp'd his Hands, call'd for Vine-Branches dipt in Water, had a great desire for Musick and Dancing, and made a great Motion with his Feet as he lay upon the

Bed

Bed. Mean time in came the Muſick, upon the hearing of which the old Man was wondrouſly pleas'd; but yet through extreme Weakneſs, and continual Preſſure of Breaſt and Heart, he cou'd hardly be mov'd from one ſide to another, ſo that in a few hours after he was ſeized with a violent Pain that carried him off.

HISTORY IV.

A Country Youth about *Nardo* having got a Melon, that had a natural Hollowneſs in it, wherein lay a Scorpion, firſt threw off the Scorpion, and then eat up the Melon. In leſs than two hours after he was taken with a moſt ſevere Colick, preſently after with a Fever and moſt fatal Symptoms both of the vital and natural Region, the violence of all which brought him to his End the third day. He alſo was mightily pleas'd with the Muſick and Dancing, and wou'd always have the Green-leaves of Reeds by his Bedſide. Whence we infer, that he dy'd by the Virulency of the Scorpion.

HISTORY V.

Of the Virtue of the Lapis Indicus *or* Indian Stone, *commonly call'd* Serpentinus, *againſt the Stings of* Scorpions.

This Stone is found in the Head of the *Indian* Serpent, with us *Cobra de Capelo*, and by the common conſent of all that write of the Product of that Country, is believ'd to be a Specifick to draw out Poyſon from any Part that has been ſtung by a venomous Creature. It has nevertheleſs been diſcover'd by the repeated Experi-

ments of the most accurate *Rhedi*, made on it about the most powerful Poyson of the Oil of Tobacco, Vipers, and *African* Scorpions, that its Virtue of sucking out Venom is only pretended and false, as may be seen by his Letter to *Kircherius*. It was long before I cou'd any way quit the Opinion of so great a Man, because of the great weight of the Experiments which he has made in the Court of so great a Prince: But having received most acceptable Letters, when I was employ'd in writing these things, sent me to *Rome* by my Father, from the very Learned Father *John Dominicus Putignani* of the Society of *Jesus*, I chang'd my Opinion, as having understood from those Letters, that the Vertue of the foremention'd Stone cou'd not be altogether pretended, but partly true, of which that Learned Father has made experiment at *Paula*, a City of *Calabria*. The Substance of the fore-mention'd Letter is this.

" Upon my Departure some Years ago from " *Sicily*, I took along with me some of the Ser- " pentine-Stones, which were given me by a Re- " ligious Gentleman that was lately come there " from *Portugal*. I went to *Paula*, a Town of " *Calabria*, where I staid for some time. Mean " time one of the Peasants of *Calabria* had his " Neck stung by one of the Scorpions of that " Country in the Month of *August*, but mak- " ing a slight matter of it, us'd no Remedy; " and therefore most fearful Symptoms coming " upon him, he was brought into imminent " hazard. Three days being pass'd, upon in- " formation of his Case by his Friends, I pre- " sently went to the Patient, to make an Expe- " riment of the Virtue of these Stones. When

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" I came I found him in a dying condition; his " Son ſhew'd me the part of his Neck that was " ſtung, which had a little Eſcar grown over " it. After having made an Inciſion with a " Lancet, I preſently apply'd one of the fore- " mention'd Stones, which ſtuck very cloſe to " it; and within four or five minutes of an " hour, the Patient began to ſigh ſtrangely, and " to fetch his Breath pretty faſt, and in about " a quarter of an hour was perfectly cured, " many of his Country-men being preſent. I " took notice when I firſt apply'd the Stone, " that it was preſently to be diſcharged of the " Poyſon that it ſuck'd in, by infuſing it in Milk, " by which means the Seeds of the Venom " were taken off. Altho the Patient was freed " from the Diſeaſe in a quarter of an hour, " yet for his greater Safety he continu'd to ap- " ply the Stone for other two days; and I ob- " ſerv'd every freſh Application, it always left " in the Milk ſomething of the venomous Sub- " ſtance, till at length it did not colour it at all. This is the Subſtance of the Letter ſent me by that Learned Father, writ in *Italian*.

Whence we muſt infer that the forementioned Stones do truly extract Poyſon; but becauſe there are many counterfeit ones ſold for a ſmall Price by the *Arabians* and *Indians*, who herein put the cheat upon us the Inhabitants of *Europe*, as the foreſaid Mr. *Redi* acknowledges, it is therefore no wonder that very often they fall ſhort of expectation. By the way, we muſt call to mind the Rules laid down by Mr. *Boyle* in his Treatiſe concerning the Unſucceſsfulneſs of Experiments; where he diſcourſeth at large of Experiments that ſucceed not, tho they be really true ones.

HISTORY

HISTORY VI.

Francis Mustel, a Peasant of the Province of *Lecce*, ten Years ago, about the beginning of *July*, was stung in the Left Hand by a *Tarantula*, as he was busy gathering Ears of Wheat. Having kill'd the Spider, he went home with his Company, but by that time they had gone half way, on a sudden he fell down upon the Ground, as if he had been seized by an Apoplexy; after which he cou'd not breath without difficulty, his Face, Hands and other Extremities turning black. His Companions that knew the Cause of his Distemper, fetch'd the Musick, upon the sound of which the Patient by degrees came to himself, beginning to sigh, and to move first his Feet, then his Hands, and so the whole Body; at last getting upon his Feet, he fell a dancing very keenly, and fetch'd up such dreadful Sighs, that he almost frighted those that were with him. As he danc'd about he bare in his Hands green Twigs of Reeds and Vines moisten'd with Water, sometimes he rowl'd himself upon the Ground, and struck very fiercely upon it with his Feet. Two hours after the Musick began, the Blackness of his Face and Hands went quite off, and having gone through the Dances for three days after the usual manner, and so forcing out Sweats, he was restor'd to perfect Health. Every Year, about the time he was stung, the Pain in the Part affected returns with all the forementioned Symptoms, but not so violently; and unless the Paroxysm that comes creeping on be prevented by Musick and Dancing, he is seiz'd with it on a sudden, so that about the suspected time he is often found

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by his Friends lying in the Fields, ſtruck down with the fatal Diſeaſe; but then the Muſick being brought, he is preſently cured again.

HISTORY VII.

One *Peter Simeon* of the Province call'd *Terra d' Otranto*, a young Man of a hot and dry Conſtitution, living in the Country, was ſtung one night under his Left Ribs by a *Tarantula*, which perhaps was of the blackiſh kind, as may be gather'd from the enſuing Symptoms. He preſently found a grievous Pain in the Place that was ſtung, and forthwith fell down upon the Ground, ſeiz'd with a Chillneſs all over the Body, a ſtanding of the Hair, Pain of the Share-Bone, Extenſion of the Yard, *&c.* His Legs were feeble, he fell a ſighing and wailing, and complain'd he was like to be ſuffocated, endeavouring to cry aloud, but was not able. Next morning they that were about him carried him to the Town, brought the Muſick to him, and that kind of it was moſt agreeable to him, which the People of our Country call *Catena*. Upon the hearing of the Muſick he began to dance, Sweats came very faſt upon him, he kept waking for a week, drank pure Wine, had no Stool for four days, his Fancy led him to a Funeral Song, he wou'd be plung'd into Water, lov'd a ruddy Colour, mortally hating what was green, which he wou'd tear in pieces, and trample under his Feet. In the night time he wou'd be ſcratching his Heels with his Hands; by which means he was ſomewhat diſpos'd to ſleep. He ate little or nothing, but dancing almoſt a whole week, was perfectly cured by Sweating and Muſick. This Hiſtory I have

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taken out of *Epiphanius Ferdinandus*, his 87*th* Obſervation, principally with this view, that the Symptoms of this Poyſon might be ſet in a clearer Light be farther diſcover'd.

HISTORY VIII.

'Tis a Maxim, *In rebus Phyſicis affigenda ſunt potius Pondera Credulitati, quam addendæ Plumæ.* In matters of Phyſick Credulity ſhou'd have its Wings clipped, rather than be help'd to fly. One of the Phyſicians of *Naples* thinking very ſeriouſly of this not long ago, thought he ought not to give any credit at all to the ſo much talk'd of Effects of the *Tarantula*, unleſs he made trial of the matter upon himſelf. Whereupon ſome *Tarantulæ* being brought to *Naples* from *Apulia* in the Month of *Auguſt* 1693. he put two of them upon his Left Arm betwixt his Shirt and his Skin, before ſix Witneſſes and a Publick Notary: It was not long before he was ſtung, and he found a Prick like that which is made by an Emmet or Fly, and at the ſame time a Pain in the jointing of the Ring Finger of the ſame Arm. Next day the Part that was ſtung grew reddiſh, and there was round about it a blew and yellow Circle: The third day the yellow Circle ſwell'd, with a continuance of Pain: The fourth day the ſwelling of the ſaid Circle went off, and the Part that was ſtung continu'd of a colour ſomewhat red and blewiſh, but he ſcarce felt the Pain. Thus the Diſeaſe held without any freſh Onſet of Symptoms for fifteen days: the fifteenth day a black Scurf grew over the Part that was ſtung, which being taken off, another came upon it, and then alſo the yellow and blue Circle appeared. A month after the ſting-

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ing, the Patient was seiz'd with a slight Weakness, which I do not know whether to attribute to the virulency of the foregoing Disease, or to other occult Causes. Soon after he went home to his own Country to retrieve his Strength, and return'd to *Naples* three months after, where he now lives, and does very well. The 7th Day after the Stinging the *Tarantula* dy'd. From this History, which was imparted to me by my very good Friend Dr. *Bulifonius*, we may gather, that a *Tarantula* transported to foreign Countries does not produce fatal Symptoms by stinging; and that the Heat of such Countries is not active enough to elevate the Venom to a due pitch.

CHAP. XII.

Some things propos'd by way of Doubt, concerning the genuine Nature of this Poison.

'TIS the common Quality of all Poisons, to display their whole Force suddenly, and with a violent Fury, upon the Life of Animals; and this they do not with a bulky, but in a small and sometimes unperceivable quantity. Generally Poisons operate either by curdling or dissolving; and some things inoffensive to Beasts, are fatal to Men, and *e contra*. So that 'tis not the Activity of the Poyson, and a venomous Quality in the Substance, that's requir'd for doing the injury, so much as a particular Disposition and Analogy of the Pores in the Parts of an Animal, proportion'd so as to receive the Poyson. *Scaliger*, *Exerc.* 33. §. 2. gives an Instance of a Reaper, that being heat-

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ed under the scorching Influence of the Sun, and extream thirsty, drank some Cup-fuls of Water in the height of his Heat, and fell down dead soon after. Now in this case the Water was like Poyson, for the Humors being mightily rarify'd by the Heat of the Sun, were so dispos'd, that as soon as it join'd 'em, its Chilness produc'd an immediate and fatal Coagulation. And I have prov'd at large in my Book of *Mechanica Medicinalia*, that Pleurisys, Quinsys, and such other Diseases proceed from sudden cold by the same Mechanical Contrivance.

In corrosive Poysons, we observe that their edged and cutting Particles corrode and dissolve the solid Parts, and curdle and coagulate the Fluid. The effect upon them both is the same, namely, Solution; which in the Fluids is Coagulation, and in Solids Corrosion. When the virulency of the Pox first seizes a Man, it produces congealing Effects, as we may gather from the Buboes, Nodes, Stiffness in the Joints, *&c.* But when the Disease advances, and the venomous Matter is much exalted by repeated Circulation, it produces dissolving effects, such as Rottenness in the Bones, piercing boaring Pains in the Parts, Leanness, Fevers, *&c.* And this gives us to know, that the Production of one Symptom more than another requires a particular Disposition in the Body for receiving the Venom.

The *Tarantula* breeds in *Puglia*, the most parch'd Country of all *Italy*; and as the Constitution of a People is always of a piece with the Temperament of their Climate, so the Natives of this Country are of a very hot Constitution, impatient, and very much subject to acute and inflammatory Diseases; from whence we make

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an obvious Inference, of that vehement Volatiliſation of the Juices, that is ſometimes ſo obſervable in the Blood of the *Apulians*, that the ſubtiler Part being exhal'd, there remains nothing but an earthy fix'd Part, which readily breeds hypochondriack and melancholick Diſorders. So that whether we conſider the Temper of the Inhabitants, the Nature of the Climate, or the Diſpoſition of the Poyſonous Animal, we'll find in all of 'em the higheſt Activity, Volatiliſation, and Impetuoſity, which may ſerve to direct us in forming an Opinion of the Nature of the Poyſon of the *Tarantula*.

Upon a narrow and attentive Scrutiny, we'll find that the nature of Poyſon deriv'd either from mad or virulent Animals, conſiſts in a Compoſition of too active, volatile and rapid Particles, which being mix'd with the Blood, ſcour over all on a ſudden, and by raiſing a violent Commotion, diſſolve the mutual Bond of the conſtituent Parts of the Blood, upon which all the Parts being left to their own tendency, and falling off on all ſides, the Coagulation takes place; which ſhews it ſelf in Anguiſh at Heart, Speechleſſneſs, Oppreſſion of the Pulſe, Blackneſs of the extreme Parts, and ſuch other Symptoms. To this purpoſe is the Obſervation of *Benivenius* mention'd in his *Hiſtor. cap.* 56. *I had a Servant*, ſays he, *that being ſtung by a Scorpion, was ſeiz'd with ſuch a ſudden and cold Sweat all over his Body, that he complain'd of being wrap'd in the coldeſt Snow and Ice; but he was preſently cur'd by a Doſe of* Venice Treacle *in ſtrong Wine.*

This Advance is further confirm'd by many Obſervations made upon mad Animals. Tho' Man is void of all Poyſon, yet ſometimes his Spirits are ſo exalted and irritated by Anger,

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as to assume in a manner a venomous Nature; for if in that actual Fit of Anger he happens to bite one, a venomous Madness has been known to ensue. This is more manifest in Dogs, Cats, Wolves, Mules, and such other Animals, provok'd to Anger, which turn thereupon mad, and communicate a venomous Madness by their Bites. It can't be alledg'd that these Animals had Poyson lodg'd in their Body before, since all the force of their Venom consists in the raising of the Humors and Spirits to the highest degree of Exaltation and Rage. In *July* 1691. I saw a Mule at *Padua* that turn'd mad, either thro' an over-bearing venereal turgency, or thro the violent Heat of the Summer; and springing out of the Stable, threw down a Man, whom he bit in several places of the Arm and Neck, and kick'd with his Heels; upon which the poor Wretch died a few hours after; but before he dy'd, he grew mad, and run at the People about him with intent to bite 'em.

The excessive Activity in the Blood and Climate of the *Apulians* is further confirm'd by this Remark, That there's a greater frequency of melancholick and mad People in *Puglia* than in any other Country of *Italy*; which gave occasion to the erecting at *Naples* that celebrated and great Hospital of incurable Persons, in which great numbers of Madmen are kept. A further Confirmation may be taken from the great frequency of mad Dogs, whose Madness is justly attributed to the scorching Heat of the Air. But such is the Divine Bounty, that those who are bit by mad Dogs are speedily cured by repairing to the Tomb of St. *Viti* about 40 Miles from *Lecca*, where the Intercession of that Saint procures 'em a favourable Return from the Almighty.

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Now this high Exaltation of the Venom, or the raging Fury of the Spirits rais'd to a venomous Pitch, which we have aſcrib'd to other Animals, may juſtly be attributed to the *Tarantula*, as the ſole Fund of its Venom. The *Tarantulæ*, and other Spiders, are generally placed by Authors among poiſonous Animals: And though *Harvey*, *de Gener. Animal. exerc.* 57. ſays, he could obſerve no Difference between a Prick made in his Hand with a Needle, and another made with the Sting of a Spider; yet Dr. *Liſter*, *de Inſect. Angl.* ſays there is this Difference, That the Place which receives the venomous Puncture gathers it ſelf in a Knot, and aſſumes a Redneſs, Heat, and Inflammation, as if 'twere preparing to expel the nocive Poyſon.

But tho' all Spiders are venomous, and their Bites are pernicious, yet thoſe are more venomous which breed in very hot Countries; as it appears from the *Tarantulæ* of *Puglia*, and the Scorpions both of that Country and of *Africa*. For the Humors of the *Tarantulæ* being rais'd to the higheſt Pitch of Exaltation, by the fiery Heat of the *Apulian* Air, 'tis no Wonder if that Animal degenerates to a venomous Madneſs, as other Animals are wont to do. And hence 'tis that the *Tarantula* which frequents the Mountains upon the Confines of *Apulia* is inoffenſive, and its Bites do no Harm in the Winter. Nay, if you tranſport a *Tarantula* to foreign Countries, it ſhall do no Harm in Biting or Stinging; becauſe, in ſuch Countries, and in ſuch a Seaſon of the Year, its Humors cannot be heighthen'd to the due Pitch of Venom.

This Venom therefore in Reſpect of it ſelf, muſt conſiſt in the higheſt Degree of Exaltation;

but with Respect to the Diversity of the Constitutions of Men, it produces various Effects: Among which, the principal are Condensation, and Coagulation, and an Oppression of the Spirits; these being sufficiently manifest in the Anguish at Heart, the low Pulse, the Difficulty of Breathing, the black or livid Colour of the Face and extream Parts, the Coldness of the whole Body, the Swelling, Numness, Pain, and Inflammation of the Part affected, the Cure of the Disease compass'd by the Spirit of Wine impregnated with Rosemary Flowers, or the Essence of Rosemary Flowers, Sweat procured by violent Leaping, the continual Pains of the Head and Bones, Swoonings, Inappetency, Fear of Suffocation, and a thousand other Symptoms, that appear in the insuing Years after the Person is stung. Whether this Condensation proceeds from the acid or the alcaline Parts of the Poyson, let better Heads determine: This I am sure of, That some Alcali's are endow'd with the Vertue of Dissolving, and others of Curdling; and the most judicious Authors say the same thing of Acids; so that in so doubtful a Case, 'tis not Speculation, but Experience and Trial that can find out the Truth. I wish yPhsicians wou'd spend less Time in these fruitless Speculations, upon the Consideration that the first and immediate Causes, and the smallest Properties of natural Things, are involv'd in Obscurity, and brought to light with the greatest Difficulty.

The Poyson of the *Tarantulæ* is not elevated to so high a venomous Degree as that of Vipers, but it goes far beyond it in the violent Motion of its constituent Parts, and the other Qualities of Motion: So that *Willis*, *cap.* 7. *de Morb. Convul.*

vul. ſaid juſtly, That the Poyſon of the *Tarantulæ* mix'd with the nervous Juice, is too mild quite to exſtinguiſh and ſink the animal Spirits, or to diſperſe 'em intirely when they are diſtracted; and that it only puts them to flight, and then excites 'em to ſlight Convulſions that have ſcarce any worſe Symptom than Pain.

And tho the Poyſon of the *Tarantula*, by the Activity of its virulent Subſtance does almoſt diſpoſe the Humors to Coagulation; yet, by Vertue of the brisk and lively Motion of its conſtituent Parts, it hinders in ſome meaſure the total Colaguation of the Humors, and by giving a Fillip to the Spirits and Humors, prevents their final Sinking. Nay, ſometimes ſuch is the Agitation of the Spirits, that they degenerate into involuntary and purely ſpaſmodic Motions; and accordingly ſome Perſons ſtung by a *Tarantula*, are thereupon ſeiz'd with violent Convulſions, Shiverings, a Looſeneſs, and many other involuntary Motions.

I leave the impartial World to judge, whether theſe doubtful Advances of the Nature of this Poiſon are true, or at leaſt likely. This I muſt confeſs, That I take more Pleaſure in obſerving the ſtanding and conſtant Motions of Nature, relating to the Diagnoſticks, Prognoſticks, and Cure of Diſeaſes, than in ſuch idle and fleeting Speculations, which laſt only till they are joſtled out by an oppoſite Notion: Upon which Head *Cicero*, *de Nat. Deor.* ſaid well, *Opinionum Commenta delet Dies, Naturæ Judicia confirmat.* (*i. e.*) Time overturns the Fictions of Opinion, but it confirms the Judgments of Nature.

CHAP. XIII.

A brief Enquiry into the Effects of Musick, in this and other Diseases.

ALL the World knows how wonderful and various the Effects of Motion are; Generation, Corruption, and all sublunary Alterations are the Product of Motion: Whatever lives, whatever grows, and whatever undergoes the sensible Mutations of Life and Destruction, is in a perpetual Motion. 'Twas from this Consideration, the wiser Sort of Philosophers made Motion and Matter the two grand Principles of Things. And considering that the Operations of Motion are performed by the Contact of Bodies, 'tis no Wonder that the slightest Impressions of Motion produce admirable Effects, by communicating the *Impetus* of the Contact to the very remotest Parts; as *Borelli* has demonstrated in his golden Book *de Vi Percussionis*. Tho' gouty People are unfit for all manner of Exercise, I am of the Opinion, That constant Conversation with their Friends, or the Reading of Books with a loud Voice, may do 'em the same Service with Exercise; for in speaking, the Muscles of the Mouth and adjacent Parts are contracted and exercis'd; and by Vertue of that Contraction, the Expression and Circulation of the Liquids, that lye within the Verge of Contact, is performed with more Expedition and Facility; and thereupon all, even the remotest Liquids, circulate with greater Velocity. That Speaking loud, as well as Singing, is justly reckon'd among the kinds of Exercise, is manifest from the excellent Words

Words of *Plutarch*, in his Treatiſe *de tuend. bon. val.* *It may be alledg'd*, (ſays he) *That 'tis needleſs to preſcribe Exerciſe of the Body for Students, upon the Plea, that their daily vocal Diſputes are an admirable Sort of Exerciſe, conducive not only for Health, but for the Strength of the Body; not that Strength that beats out the Muſcles and bends the Skin, but that which gives an internal Force, a genuine Vigour to the vital and more principal Parts. And indeed, conſidering that Voice is not a ſlight and ſuperficial Agitation of the Spirits, but that which reaches the very Fountain and* Viſcera, *which increaſes the Heat, ſubtiliſes the Blood, purges the Veins, opens the Arteries, digeſts the Aliment, keeps the ſuperfluous Humors from growing thick, and ſinking like Dregs in their Receptacles; upon theſe Conſiderations, I ſay, Students ought to accuſtom themſelves to this ſort of Exerciſe.* And hence it comes to paſs, that religious Perſons who live in Cloyſters are very healthful, notwithſtanding they uſe but little Exerciſe; for they employ themſelves Night and Day in Quires, in Singing the Praiſes of God, and pouring forth Prayers, compenſating thus the Motion of their Body with the Exerciſe of the Voice; by which Means they digeſt well, and enjoy a longer State of Health than other Men. 'Twas with the ſame View that *Aſclepiades* cur'd Diſeaſes with a hanging Bed, in order to *extenuate Diſeaſes* (as he call'd it) by moving and exerciſing his Patients in ſuch a Bed; and in travelling throw *Dalmatia*, I was inform'd that ſome of the *Dalmatians* retain that Method of Cure to this Day. To be carry'd in a Coach or a Chair, is likewiſe a ſort of Exerciſe; tho' the Body is not much ſhak'd by that Exerciſe, yet the new and continual Impulſe of the Air upon the Body, and that Mo-

tion, as gentle as 'tis, promotes the Courſe of the Humors, increaſes Tranſpiration, and clears the Body of Excrements. I conclude therefore, upon the fore-going Reaſons, that gouty People ought to apply themſelves often to the Exerciſe of the Voice, and Riding in a Coach. This I have mention'd with Intent to ſhow how great Effects may flow from a ſmall Motion, and give a clearer View of what I am about to advance concerning the Effects of Muſick. Muſick is one of thoſe Motions that ſmartly ſtrikes the Air, and diſpoſes it to brisk Undulations. Now theſe Motions, or ſwift Undulations, being communicated by Contact to the Blood and Spirits, make different Impreſſions upon 'em; ſometimes by exciting them to Motion, ſometimes by compoſing them to Reſt; and the Variety of Sounds raiſes various Idea's of things in our Minds, ſo that ſome Conſorts inſpire us with Courage, others with Chearfulneſs, and others again with Piety, according as the Spirits and Humors are affected. The violent Motions rais'd in the Spirits of Soldiers by the Sound of Drums and Trumpets, are evident from their Boldneſs, Alacrity, and Readineſs to undergo Danger, and their eager Warmth in Engaging the Enemy. Thoſe who are ſorrowful, angry, or affected with other Paſſions of the Mind, are excited to Chearfulneſs and Joy, by the gentle and agreeable Harmony of Muſick, and by the Continuation of the ſame are lull'd aſleep.

That the above-mention'd Undulations of the Air have an Influence upon the ſolid and fluid Parts of the Body, is manifeſt from the various Examples of Brutes, as well as from the grating of the Teeth. A great many are ſo affected

affected with the disagreeable Undulation of the Air occasion'd by the Motion of a File or a Saw, that their Teeth grate, and are uneasie; and that because the Particles of the Air thus mov'd, being disproportion'd to the Pores of the Nerves inserted in the Roots of the Teeth, do so distort and twitch 'em, that they are either, benumm'd or affected with Pain. Further, all of us are sensible that upon Hearing an unwonted and agreeable Harmony of Musick, we feel first a gentle Shivering over the Skin, and a Sort of Erection of the Hair. Several Authors testifie, That Brutes are likewise affected with the Sound of Musick: *Strabo* affirms that angry Elephants are appeas'd with Musick, that Bees are delighted with the Sound of Metal, Swans with a Harp and with Singing, and Dolphins with Musick. I have seen my self a Dog at *Ragusa* in *Dalmatia*, that was such an Enemy to the Sound of the Harp, or any other Musical Instrument, that upon hearing it, he fell a howling and almost a crying.

Alexander ab Alexandro gives yet a more curious Instance, in his *Dies Geni. lib.* 6. *cap.* 5. where he acquaints us that *Theophrastus* affirm'd, That Musical Instruments, harmoniously touch'd, would cure the Bites of Vipers. *Asclepiades* made the same Remark; affirming, that frentick and brain-sick Persons are restor'd to their Wits and their Health, by nothing more than by the Harmony and Consort of Voices. 'Tis said likewise, That *Ismenias* the *Theban* cur'd several Persons of the *Sciatica*, by playing on the Flute or the Harp. See more of this Nature in *Aldrovandus de Insect. lib.* 5. *fol.* 621.

It being manifest from the Premises that Musick ravishes healthy Persons into such Actions as imitate the Harmony they hear, we easily adjust our Opinion of the Effects of Musick in the Cure of Persons stung by a *Tarantula*. 'Tis probable, that the very swift Motion impress'd upon the Air by Musical Instruments, and communicated by the Air to the Skin, and so to the Spirits and Blood, does in some Measure dissolve and dispel their growing Coagulation; and that the Effects of the Dissolution increase as the Sound it self encreases, till, at last, the Humours retrieve their primitive fluid State, by Vertue of these repeated Shakings and Vibrations; upon which the Patient revives gradually, moves his Limbs, gets upon his Legs, groans, and jumps about with Violence, till the Sweat breaks and carries off the Seeds of the Poison

Nor is it wonderful that Musick should have so great a Vertue of dissolving the venomous *Coagulum* of the Spirits and Humors, considering that it chiefly and immediately affects the Organ of Hearing, that lies very near the Brain; and affects even the Brain it self, or the minute or fine Fibres in which the Spirits lye drooping and almost sunk, till the continual and forcible Contact of the Musick makes them march out upon the Membranes of the Brain; upon which having partly recover'd their Motion, they enter with greater Facility and Agility into the little Tubes of the Nerves and Fibres, and so recover their former Correspondence with the Humors and solid Parts. The Force of the Air thus mov'd by the Impulse of the Musick, is encreas'd and quicken'd by the ardent Heat of the Sun, and of the thin Air of

Apulia;

Apulia; so that the Sound strikes the System of the Spirits, Humors, and Nerves, with more Violence; and its greater and more violent Impulse, raises a Fermentation in the Humors, and restores them to their due Pitch of Exaltation and Fluidity. Now all these Effects can't be compassed by Diaphoreticks taken inwardly, as Intimated above; for before such Med'cines can reach the Blood, their Force is in a great Measure impair'd; and besides, they operate only upon the Fluids, and not upon the Solids: Whereas the musical Sound affects at once both the Solids and Fluids, and that very forcibly, and by Vertue of its Percussion upon the small Fibres of the Brain, in which the Secretion and Distribution of the nervous Juice is immediately perform'd.

This, Reader, is what I thought fit to communicate to thee concerning the *Tarantula*.

Nov. 13. 1695.

DISSER-

DISSERTATION II.

OF THE

USE and *ABUSE*

OF

Bliſtering-Plaiſters.

The PREFACE *to the* Reader.

I Perceive the very Title of this Diſſertation will provoke many of our new phyſical Sectaries in Italy, *to fall upon me with Invectives; to cry out, What does this Galenical Spark mean? This Man that's altogether unacquainted with the new Method of Practice? To what purpoſe does he teaze us with the vain Oſtentation of the Ancients? But if theſe Gentlemen will but peruſe the two fore-going Books of Practice, they'll be ſenſible I am not the Man they took me for. I ſtand up for the Liberty of Phyſick, and am ty'd neither to the Ancients nor the Moderns: I follow both, where Truth is their Guide; and, like a Refiner of Metals, pick the Gold and Silver of Precepts out of the Droſs both of the modern and ancient Phyſick. In imitation of the* Coans *I adore repeated Experience, and deſire*

nothing

nothing more earnestly, than that Physicians would approve themselves like the reviving Offspring of the Heroes of that School, and lay aside their lazy Despair in the Way of Inquisition; that they would keep up, as much as they can, the Majesty and Weight of Nature, and apply themselves with Diligence to the Illustration of Physical Matters. To come to Blistering-Plaisters: The Arabians *invented them with Intent to rouze up Persons affected with sleepy Diseases, such as a Lethargy, an Apoplexy,* &c. *But the Physicians of those Times were altogether ignorant what Mechanism their Vertue was founded upon, and what other Diseases they were proper for besides those above-mention'd. The Doctors that came after, contenting themselves with the Name of* Revulsion *that the* Arabians *gave 'em, and being ignorant of the mechanical Way of this Revulsion, went rashly on in the Dark, and, pursuant to the lucky or unlucky Event of Blistering-Plaisters, were split into two Factions; the one recommending, and the other disproving the Use of such Remedies. In this our Age,* Helmont, *either forgetting or contemning the Footsteps of Nature, has disputed very warmly against the Use of Blistering-Plaisters, and gave Being to a Sect that rejects these as well as the other Remedies of the* Galenists. *And indeed I was for a long time of their Mind, till I was taught by observing in many Hospitals of* Italy, *the Progress, History, and Effects of Diseases, that Blistering-Plaisters are sometimes very serviceable. Being thus undeceiv'd, I discarded their Opinion, and throwing off the Shadow of Prejudices, that I had taken from the Reading of new Books and the Authority of Precepts, I apply'd myself wholly to a Scrutiny of the Advantages and Disadvantages of Blistering Med'cines. At the same Time I made a Tryal upon live Animals, by infusing into their Blood the Tincture of* Cantharides, *and applying Blistering-Plaisters to their Skin after 'twas shav'd smooth;*

smooth: And having thus made a great many Observations, both practical and anatomical, I tack'd 'em all together for my own Use; and when these fell into the Hands of some learned Physicians of this City, they requested me to publish 'em in company with the fore-going Tracts. For my part, I took the Subject to be invidious; and fearing all the new Doctors would fall upon me in a lump, declin'd it for a long Time: But at last, being overcome by their Solicitation, and incouraged by a Treatise de Stimulis, *lately set forth by my learned Friend Dr.* Bellini, *I pick'd out what seem'd to be most usefull, and drew 'em up in the four insuing Chapters.*

As I offer 'em candidly to the Reader, without leaning either to the new or the antient Sects; so I expect the Reader, after an accurate Survey, will either comply where he finds me in the Right, or correct my Mistakes.

Rome, *March* 15. 1696.

CHAP. I.

Some Experiments of the Effects of the Cantharides.

PRactitioners have argued very warmly against one another upon the Use of Blistering Plaisters, some approving and some disproving 'em. This Contention is owing either to the private Feuds occasion'd by the Diversity of Sects, or other Causes, as that between the *Helmontists* and Modern *Galenists*, and the like; or else to the customary Way of Judging

of

of the Effects of Blistering-Plaisters, not so much from the Nature of the Thing it self, as from Opinion and receiv'd *Hypotheses*. 'Tis no Wonder that those who act so inconsiderately, and never think what the Variety of Place, Temperaments, Causes, and Ages requires; 'tis no Wonder, I say, they should fall into Mistakes and deplorable Divisions. For my own share, pursuant to my wonted Custom of Tracing the Footsteps of Nature, I shall here briefly lay down what I observ'd with Patience upon this Head in several *Italian* Hospitals. And while I vent nothing but what is true and of use to Mankind, I am under no manner of Concern for the sinister Constructions of others.

EXPERIMENT I.

Rome, *May*, 1692. I ty'd a Mastiff-Dog upon a Table, opened his right Jugular Vein, and injected with a Syringe two Ounces of the Tincture of *Cantharides*, which I had made by taking two Drams of the Powder of *Cantharides* to six Ounces of the Water of *Carduus Benedictus*, and digesting them three Days upon Ashes: Upon the Beginning of the Injection the Dog vomited up watery and slimy Matter, and voided at Mouth a viscid Sort of Spittle, till I had finish'd the Injection of two Ounces, and sew'd up the Wound and sprinkled it with burnt Vitriol. This Operation was no sooner over than he fell down as if he had been dead. He refus'd to eat to the last minute of his Death, and was extream thirsty, insomuch that my Servant mov'd with Compassion, gave him, without my Knowledge, about six Quarts of Water, which he drank and presently voided

ed a great Quantity of yellow Urine. In the mean time he howl'd, and continued miserably thirsty, but we gave him no more Water. Before his Death he was seiz'd with Convulsions. He died after miserable Howlings, the fourth Day at Night.

Having opened his Carcase, I found that Part of the Neck upon which we had made the Experiment, was perfectly mortified and fœtid. In the right Ventricle of the Heart the Blood was very black and copious, with little or no Coagulation, and some Drops of Oyl, as 'twere, upon the Surface. We found there a small Polypus continuous to a Clot of Blood. In the left Ventricle of the Heart we found two little Polypus's, and the Blood dissolv'd, but extream black. The Lungs and the other *Viscera* were sound. In the Urine-Bladder we found not the least bit of that slimy Matter that naturally guards the inside of it; perhaps the Acrimony of the *Cantharides* had gnaw'd it off. The Gall in the Gall-Bladder was somewhat black. The Blood that ouz'd out upon the cutting of the Veins or the *Viscera* was very black, without any Coagulation, and cover'd with little Drops, like Oyl, on the Surface.

EXPERIMENT II.

Rome, July 14. 1692. I ty'd down upon a Table a young and indifferent big Dog, and injected into his right Jugular two Ounces of the Tincture of *Cantharides*. The Wound was no sooner sow'd up and dress't as above, than the Dog vomited and fell down half dead. Two Hours after he held out his Tongue for Thirst, with a great deal of Anxiety. He would not eat,

eat, and was extream thirsty, but I allow'd him no Water. Six Hours after he expir'd with grievous Howlings. Having open'd the Carcase, I found all the *Viscera* sound; but the Blood was very black and dissolv'd, and cover'd in the Surface with little Drops like Oyl. The Dog being young, and not very big, and no Water being allow'd him, the Humors were soon dissolv'd and melted down by the caustick Salt of the *Cantharides*, so that he dy'd in six hours.

In both these Dogs, I observ'd upon injecting the Tinctures, that no part was so soon affected as the Head; for presently it nodded and drooped downwards, so that the Creature could not hold its Neck streight. The first Dog hung down his Head immediately upon making the Experiment, and could scarce raise it; but as soon as he drank the six quarts of Water, he got to his Legs, rais'd up his head, and look'd brisker. But as soon as the Water was voided by Urine, he fell down again and never rais'd his Head more, and died on the 4*th* day half stupid and reeling. From whence an Inference may be drawn, That the *Cantharides* are chiefly nocive to the Head, and so ought to be carefully avoided in the inflammatory and acute Disorders of the Head: But this is not to be absolutely asserted, till it be confirm'd by hundreds of Instances.

EXPERIMENT III.

Rome, April 14. 1692. I took eight Ounces of Blood just drawn from the Vein of a Patient, and divided it into two Vessels; in one of which I put a Scruple of the Powder of *Cantha-*

rides,

rides, without mixing any thing with the Blood in the other. The Blood mix'd with the Powder, was ſooner coagulated than the unmix'd, and afterwards aſſum'd a Lead-Colour and a blackiſh Surface: After ſome time a great Quantity of little Bladders appeared all over the Surface, and when they broke voided a blackiſh *Serum*. At laſt all the Blood mix'd with the Cantharides, diſſolv'd into a blackiſh and livid *Serum*; but that in the other Veſſel ſuffer'd no ſuch Changes.

EXPERIMENT IV.

Rome, *April* 1692. I took the Blood drawn from a Patient, and parting the *Serum* from the Blood, mix'd with the *Serum* a Scruple of the Pouder of *Cantharides*. Soon after the mixing, the Pouder precipitated to the Bottom of the Veſſel, without tinging the *Serum* with any colour; only the *Serum* became a little more liquid and thin and ſcarce coagulable. Now, to ſet this matter in a clearer Light, I ſhall here ſubjoin three Obſervations made upon Patients that had Bliſtering-Plaiſters apply'd to 'em.

HISTORY I.

A young Man of 22 years of age, of a bilious Temperament, and thin, and cur'd not long before of venereal Bubo's; expos'd himſelf to the Northerly Winds after he had been very hot before a Fire, and thereupon was ſiez'd with a *Quinſey*, which ſoon after terminated in a Pleuriſy, with a dry Cough, a very fiery febrile Heat, a hard and high Pulſe, Watchings, Thirſt,

thick,

thick, groſs and very high-colour'd Urine: He lay in an *Italian* Hoſpital.

When I ſaw him firſt, 'twas the 12*th* day of his Illneſs; and then his Phyſician preſcrib'd him the Pouder of *Cornachini*: next day he apply'd ſix Bliſtering-Plaiſters to his Body, which was very meagre. The 14*th* day he was ſiez'd with a Delirium, a ſuppreſſion of Spitting, a trembling in the Fleſh, Epileptick Motions, an unequal Pulſe and Reſpiration. He voided great Quantities of Urine, and bilious ſtinking Stools, without any abatement of the Symptoms. The 16*th*, all things aſſum'd a milder face, but the next night they renew'd their Rage, with a moſt copious univerſal and glutinous Sweat, that had an acid ſmell, and continued to the 21*ſt*, on which the Patient expired.

HISTORY II.

A Cook of thirty Years of Age, with a ſanguin and bilious Conſtitution, red Hair, and a violent Propenſity to Venery and Drinking, was ſeiz'd after a great Heat and Cold catch'd upon it, with Convulſions of the lower Mandible, and ſoon after with Convulſions of the Abdomen. In the Hoſpital they preſcrib'd him the Powder of *Cornachini*, and the next Day four Bliſtering-Plaiſters. The Application of theſe was follow'd by Vomitings, convulſive Motions, and a grievous Difficulty of Breathing; under the Preſſure of which Symptoms the poor Man dy'd miſerably on the 14*th*. Day. During the Epileptick and Convulſive Motions, he retain'd the free Uſe of his Senſes, both internal and external. I have frequently ſeen the Powder of *Cornachini* produce Convulſive

Motions, in ſleepy Diſeaſes ariſing from a great Wound in the Head: But in ſleepy Diſorders that ſpring from other Cauſes, I have found this Powder very ſerviceable; eſpecially if the Veſſels are eas'd and empty'd before-hand by a thin Diet, or Bleeding if neceſſary; for the Sleep vaniſhes immediately after the Exhibiting of that Powder. Of this I had an Inſtance very lately in a Boy of 8 Years of Age, that was ſeiz'd in the Beginning of a Febrile Paroxyſm with a heavy Sleep, and continued ſo for ſeveral Hours, till I gave him the Powder of *Cornachinni*, which diſpell'd the Sleep intirely. There's ſcarce a better Remedy than this, in Apoplexies, Lethargy, Megrims, and ſuch like Diſorders of the Head.

HISTORY III.

A young thin Woman, eight Months gon with Child, was troubled for eight Days together with Pains in her Belly, and then brought forth a Child. After Delivery the Pains ſtill continu'd, with a notable Diſtention of the Belly; and having ſlighted, or rather neglected all manner of Remedies, was adviz'd at laſt by a Phyſician to have four Bliſtering Plaiſters applied to her. This occaſion'd a Suppreſſion of the *Lochia*, which were open before. A few Days after the *Lochia* return'd, and her Belly began to ſuffer grievous Convulſions with great Pain, inſomuch that ſhe could not bear the Preſſure of one's Finger; theſe were follow'd by cold Sweats, with a Coldneſs in the extream Parts, the Pulſe and Reſpiration became very low, and in a Word ſhe was almoſt dead. A few Days after ſhe grew a little better, but was ſeiz'd

ſoon

soon after all on a sudden with a violent and convulsive Difficulty of Breathing, which sometimes turn'd to a *Delirium*, and a yellow stinking Looseness that continued for eight Days. In fine, she dy'd on the 17*th.* Day of her Illness.

CHAP. II.

Of the Inconveniencies attending the use of Blistering-Plaisters.

§. I.

THere's nothing that follows the Application of Blistering-Plaisters so soon as Thirst, with a Dryness of the Tongue; which sometimes is so great, especially in Persons of an adust Temperament and such as are not delirious, that nothing will pacifie it, but continual gargling with Water. The Thirst rages thus violently for about three Days; that is, according as the sharp Salts of the *Cantharides* are separated from the Blood sooner or later, or in a smaller or greater Quantity; then it relents by Degrees: and this Thirst I call *Sitis Vesicantium.* In the Use of Blistering-Plaisters we ought to be very cautious of prescribing them promiscuously in all Seasons of the Year, and for every Age, Constitution, and Habit of Body, or in every Disease, as the *Galenists* now adays are wont to do; for they are only to be us'd when Necessity requires it, and that in the Cases mention'd hereafter. If they are apply'd without due Caution a great many Evils will ensue, which ignorant Physicians commonly impute to

the poyſonous and malignant Nature of the Remedy, and not to the erroneous Indications upon which 'tis preſcrib'd. I have ſometimes ſeen the Ulcers rais'd by Bliſtering-Plaiſters turn to a Gangrene, or at leaſt be very hard to heal up; but whether the new Conſtitution of the Air, that then reign'd, contributed any thing in this Matter, I am at a loſs to know; only this I muſt ſay, I obſerv'd in the Year 1692, not only at *Boulogne*, but even at *Rome*, that Ulcers from any Cauſe, and ſlight Wounds, gangren'd very eaſily, and ſometimes prov'd fatal to Patients, many of whom dy'd in that Seaſon of the gangren'd Ulcers of Bliſters. Now, the Winter of that Seaſon was very cold, and brought a great deal of Snow and Ice, which in *Italy* is uncommon; and the ſucceeding Spring was very cloudy and wet, which was follow'd by a temperate and ſhowery Summer. In this Conſtitution of the Weather, did Ulcers and Wounds readily degenerate to Gangrenes, to the great Admiration of the Surgeons. We ought therefore, in Imitation of *Hippocrates*, to have an attentive Regard to the general Seaſon and Influence of the Weather, and be very diligent in giving a lively Deſcription of its Nature and Effects. But after all, the Ulcers of Bliſters are apt to corrupt and gangrene in any Seaſon of the Year, in ſuch Perſons as are Cachectick, Hydropick, troubl'd with black Melancholy, ſickly, or have been formerly maltraited by the Pox: But this is not obſerv'd in Perſons of a robuſt Conſtitution, and of ſolid built Parts, nor yet in thoſe who have been miſerably fatigu'd with tedious Diſeaſes.

II.

I've obſerv'd that thoſe who are ſeverely wounded in the Head, and ſiez'd with a Vomiting, an abolition of the Senſes, and other griev'ous Symptoms of diſorder'd Brains, are ſome of 'em ſiez'd with violent Convulſions ſoon after the application of Bliſtering-Plaiſters; ſome are ſiez'd a few hours or days after with cold Sweats which are follow'd by Death: Others die of Convulſions the next night. I remember to have ſeen one that was violently ill of ſpaſmodick Gripes and Throws in the Belly, with a Fever, and after the application of Bliſtering-Plaiſters in the Hoſpital voided by Stool a great quantity of rediſh Blood, and died ſoon after. Having thus obſerv'd again and again, that fatal Convulſions or the above-mention'd Diſorders were the conſequence of bliſtering Plaiſters applied for grievous Wounds in the Head; I freely foretold upon all ſuch occaſions what would come to paſs, and the Event always verify'd the Prediction. Wherever you ſuſpect or ſee Convulſions, abſtain altogether from Bliſtering-Plaiſters; eſpecially if they be accompany'd with a Fever, a ſharp and colliquative Conſtitution of the Blood, with a thin Habit of Body, or ſucceed to previous Watchings, to a ſpare Diet, or Venereal Evacuations. Such as have been pox'd before, are very much injur'd by Bliſtering-Plaiſters, let the Diſeaſe be what it will: So that to ſuch Patients we ought not to apply 'em, unleſs it be in great Coagulations of the Blood, and ſleepy Diſeaſes, and even then with caution. In ardent and continual Fevers, accompany'd

with a great Agitation and Impetuoſity in the Blood; in a hot and dry Seaſon, in hot and dry Countries, in hot and dry Conſtitutions, or ſuch as purſue a hot and dry Diet, or are in the prime of their Youth; in nervous Diſorders attended with a Fever that leans to the ardent kind; in the ſleepy Symptoms of ſuch Fevers as approach to the ardent kind; in the ſpaſmodick and inflammatory Diſorders of the Breaſt, and ſuch as proceed from the ſaline ſharp Conſtitution of the Blood: In all ſuch caſes, I ſay, I have oftentimes obſerv'd that Bliſtering-Plaiſters are always noxious. And tho ſometimes there is a lucid Appearance of Benefit in ſuch caſes, yet being doubtful whether that proceeded from the Bliſters, or from the other Remedies, I therefore ſeldom or never did preſcribe Bliſtering-Plaiſters in theſe Caſes; for I us'd happily to compaſs the Cure with Hypnotick, Diluting and Dulcifying Medicines.

Having occaſion above to mention ſleepy Diſorders, I muſt here take notice by the Bye, that in the moſt ardent Fevers, and thoſe which proceed as 'twere from an Inflammation of the Blood, I have ſeveral times obſerv'd in the beginning of the Invaſion a ſort of Sleepineſs, that increas'd as the Diſeaſe advanc'd, and was exaſperated by a copious Preſcription of diſſolving and Cephalick Med'cines. Repeated Obſervation has likewiſe taught me, that this ſleepy Symptom abates of its own accord, when the diſeaſe tends to a Declenſion; or if it do's not move of its own accord, is eaſily diſpell'd with the Emulſions of Seeds, Waters qualify'd with juice of Lemons, and ſuch like refrigerating things. This Obſervation I ſay is only laid for ſuch Fevers as are extream ardent

and

and proceed from an overbearing Impetuosity in the Blood. Now, the Mechanicks, will furnish us with a Reason why the Blood repairing to the Brain with so much force and rapidity, occasions a difficulty both in the Filtration of the Blood and the Secretion of the Spirits; nay the Circulation of the Spirits being thereby intercepted, their descent to the lower Parts is cramp'd and oppos'd; and by consequence, the greater Force you add to the Blood, the more you increase the Sleepyness, and *e contra*.

III

I have some times seen the application of Blistering-Plaisters followed by a sort of subsultory and convulsive motion in the Tendons, a breaking forth of Sweat, and that very copiously in some cases, a slow Pulse *&c.* and those Symptoms continue as long as the sharp Salts of the *Cantharides* abide in the Blood, and disappear upon their Expulsion, as well as the above-mentioned Thirst, and dryness of the Tongue; especially if the Blistring-Plaisters were prescrib'd upon due Indications: for if they are apply'd unseasonably, they are so far from disappearing that they assume fresh Fury. Blistering-Plaisters cause frequently, not only a Gangrene, but likewise a pissing of Blood, a heat of Urine, and the other disorders of the Bladder; especially in a thin meagre habit of Body, in a hot and dry Constitution, in the heat of the Dog-Days, and the like. The pissing of Blood, after the application of Blistering-Plaisters has been frequently observ'd by the learned *Trullius*, and *Manfredus* Professor at *Rome*. But see upon

this Head the learned *Sinibaldus*, Profeſſor at *Rome*. Bliſtering-Plaiſters ſhould be cautiouſly us'd upon thin meager Bodies; for in ſuch caſes they readily occaſion convulſive Motions, and inflame the Fever; aud ſometimes, when the Fever tends to the *Status* or Heighth, the Application of Bliſtering-Plaiſters will make it renew its Force and inflame the Symptoms. If to ſuch a Habit of Body you joyn a hot and dry Conſtitution, the Summer Seaſon, a previous and plentiful Evacuation, and ſuch a State of the Blood as tends to Diſſolution and Colliquation, you muſt avoid Bliſters altogether; and that in all Diſeaſes and all Ages, by Reaſon of the diſmal Symptoms that follow the Application. Many of the *Galeniſts*, who ſtick too cloſe to their *Hypotheſes*, are of the Opinion, That the grievous and diſproportion'd Symptoms of Colliquative Fevers, or ſuch as proceed from Diſſolution, ariſe from the venomous Quality of the Fever; and accordingly preſcribe four, ſix, or more Bliſtering-Plaiſters, in order to fetch out the Venom. But I have always obſerv'd, That the Application of Bliſtering-Plaiſters, in ſuch Caſes, is follow'd by Convulſions, Impoſthumes in the *Viſcera*, a greater *Delirium*, a conſiderable Increaſe of the Fever, and at laſt by Death it ſelf; by reaſon of the Maſs of Blood, its being more and more diſſolv'd by the cauſtick Salt of the *Cantharides*, and the ſharp Matter of the Fever. Thoſe who are delirious with an acute Fever, and a parched Tongue, die quickly upon the Application of Bliſtering-Plaiſters; and moſt of them are ſeiz'd with Convulſions before they die. Theſe repeated Obſervations made in Hoſpitals ſcar'd me ſo much, that in this laſt caſe I always conſided (and

that

that without Diſappointment) in diluting Remedies, refrigerating Emulſions, and Bleeding in the Vein of the Forehead. Sometimes Bliſtering-Plaiſters inflame a *Delirium*, or haſten the Arrival of an imminent *Delirium*, by Vertue of the great Pain they occaſion. I have been told by a creditable Phyſician, That a Piece of Bread taken juſt out of the Oven, apply'd very hot to any part of the Body, will raiſe Bliſters in half an Hour, and make Ulcers like a Bliſtering-Plaiſter; and that if this Ulcer and Cruſt be not well taken Care of at firſt, 'twill be a hard Matter to cure it afterwards. The exceſſive Uſe of *Cantharides* raiſes a filthy *Satyriaſis*; two fatal Inſtances of which are recorded by *Cabrolius*, *Obſ. Anat.* 17. And for that Reaſon I would alſo adviſe Phyſicians to apply Bliſters cautiouſly to ſalacious Perſons.

IV.

I have ſeen more delirious Perſons dye upon the uſe of Bliſtering-Plaiſters, than ever I ſaw recover. Oftentimes the Application of Bliſters ſtops a looſe Belly, and turns a high Pulſe to a low one. The Acid of Vinegar corrects and fixes the volatile Cauſtick Salt of the *Cantharides*; and therefore if you want to have ſtrong Bliſtering-Plaiſters, add a little Vinegar or ſtale Yeſt, or inſtead of theſe, the Plaiſter *de Mucilaginibus*, or the like. There's nothing that makes the Ulcers of Bliſters ſo ready to gangren, as the putting too much *Cantharides* in 'em; for the *Cantharides* being very light, inſomuch that 50 of 'em will ſcarce weigh a Dram, miſtakes may readily happen in preſcribing their Doſe; and for that Reaſon they ought always

ways to be preſcrib'd by Number, as ſix or ten, *&c.* and not by Weight. The *Cantharides* taken inwardly either againſt a deſperate Suppreſſion of Urine, or againſt a virulent Clap, or in order to excite Venery, are wont to produce diſmal Symptoms. Soon after they are taken the Bladder and urinary Paſſage is ulcerated, then the Liver is gradually inflam'd, the Inteſtines are corroded, and the *Hypogaſtrium* is infeſted with violent Pains, which are follow'd by a *Delirium* and Death, without the *Cantharides* be immediately expell'd, weakned, or clog'd: See upon this Head *Francis Joel*, who lays down a prudeut Scheme of Cure. According to *Langius*, *Epiſt.* 7. *Lib.* 1. the Antidote for *Cantharides*, is Milk, whether native or artificial. I've obſerv'd that Bliſtering-Plaiſters are uſeleſs, and even hurtful, in Men of an aduſt bilious Conſtitution; for beſides that the bliſter'd Part is violently inflam'd, and flead, with a prodigious Pain, and a ſmall Evacuation of *Serum*, and ſometimes none at all, the Bladder is ſeiz'd with a moſt violent Strangury: So that conſidering the Blood of ſuch Conſtitutions is plentifully ſtock'd with Salt and Sulphur, and diluted with little *Serum*, 'tis neceſſary to back the Uſe of Bliſtering-Plaiſters with large Quantities of diluting Med'cines, in order to prevent the Diſorders mention'd but now. And thus I have briefly run through the Inconveniences accruing from the Application of Bliſtering-Plaiſters, that fell under my Obſervation in the Hoſpitals. I proceed, in the next place, to the Advantages that accompany 'em.

CHAP.

CHAP. III.

Of the Advantages redounding from the use of Blistering-Plaisters.

§. 1.

THO' the Disorders mention'd in the last Chapter are the Product of Blistering-Plaisters, yet these ought not to be banish'd the Republick of Physick for good and all; for they are like all other Remedies. Wine, we see, intoxicates and disorders the Head very much; and yet the Governours of Societies do not prohibit it, because those dismal Effects are owing not to the poysonous Quality of the Wine, but to the Indiscretion of Mankind. In like manner, as Blistering-Plaisters are noxious in a sharp and melting Constitution of the Blood, so they are beneficial in a gross and viscid Disposition of the Blood, that tends to Coagulation and Stagnation. In Fevers accompany'd with a very low Pulse, a Coldness in the extream Parts, Anxiety, a Propensity to sleepy Disorders, and other Marks of Coagulation, 'tis incredible what Benefit is reap'd from Blisters, especially if you joyn to these Symptoms the Winter Season, a moist Constitution, or a Tendency that Way, a fat Habit of Body, and the like: For the sharp Salt of the *Cantharides* being communicated to the Humors thus dispos'd to Coagulation, disjoyns their Parts, and dispose them for their primitive Fluidity. In a Word, we have not such an effectual and quick Remedy, as Blistering-Plaisters, for dissolving the commencing

mencing Coagulations and Stagnations of the Blood in any Diſeaſe, Age, Conſtitution, or Seaſon of the Year whatſoever. And this has the greater Appearance of Truth, that it agrees exactly with the Sentiments of the *Arabians*, who firſt invented 'em. For they never us'd 'em but to rouze out of ſleepy Diſorders, and animate thoſe who were refrigerated by an Illneſs, as it appears from *Oribaſius*, the firſt *Arabian* Author that writ of 'em; and they abſtain'd from 'em altogether, when there was no Neceſſity of diſpelling Sleep or Chillneſs. But the Phyſicians of ſucceeding Ages, have follow'd other Meaſures; being buoy'd up with a falſe Opinion, that Bliſters draw out the Venom of Malignant Fevers, they preſcrib'd 'em promiſcuouſly againſt all Fevers whatſoever, to the great Detriment of their Patients; as I made it to appear in the laſt Chapter. In a Pleuriſie, whether with, or without previous Bleeding, I've obſerv'd on the fifth, or ſeventh, or the other Days that lye between, a great and ominous Difficulty of Breathing and of Expectoration; which was taken off, to a Miracle, by applying two Bliſtering Plaiſters to the Legs or Ancles. Nay, I'll go yet farther: If a Difficulty of Breathing and Spitting happens on any Day whatſoever after a Pleuriſie, preſently apply two Bliſtering-Plaiſters to the Legs. *Hippocrates* was of the ſame Opinion, *Lib.* 2. *Progn.* 67. *In the inflammatory Diſorders of the Lungs* (ſays he) *all Swellings upon the Legs are a good Omen; nay, a better thing cann't happen, eſpecially if they appear when the Spitting is alter'd.* I ſolemnly proteſt, that very few died out of Hundreds that were treated after this Manner, by a very learned Phyſician in a famous Hoſpital: And

this

this I obſerv'd chiefly at *Rome*, in the Winter of 1694; at which Time Epidemick Pleuriſies were very brief, by reaſon of the rigid Cold occaſion'd by ſuch Plenty of Snow and Ice. For the ſharp Salt of the *Cantharides* being introduc'd into the the Maſs of Blood, and ſo to the Lungs where the Stagnation was dreaded, it preſently diſſolv'd the growing Coagulation, and reſtor'd the Humours to their former Circulation; it leſſen'd the Difficulty of Breathing, and promoted the Egreſs of Spitting, to the great Eaſe of the Patient. In the mean time, take notice, That the pleuritick Perſons who reap'd this Benefit were not purg'd in the Beginning, as ſome Practitioners would have 'em, but had ſeaſonable Bleeding preſcrib'd with nothing elſe but pectoral Decoctions and gentle alcaline diſſolving Remedies, in the Progreſs of the Cure. I remark'd that if any looſeneſs accompanyd the Pleuriſie, 'twas either check'd or quite ſtopp'd by the Application of Bliſtering-Plaiſters, to the great Benefit of the Patient. Sometimes the Application was follow'd by a copious Evacuation of Urine; which gave great Eaſe, as well as the former Effect. Infallible Experience, and *Hippocrates*, are Evidence that Looſeneſſes are for the moſt part fatal in a Pleuriſie; in regard they ſuppreſs the Spitting, increaſe the Difficulty of Breathing, and, in a few days, either kill the Patient, or turn him into Chronical Diſeaſes. Hence 'tis evident how far thoſe are out, who, upon the Pretence of Leſſening the Cacochymy, or ſome ſuch triffling Story, exhibit Purgatives in the Beginning of a Pleuriſie, to the great Detriment of the Patient. For ſince *Peripneumonia's* and Pleuriſies derive their Origin from the inflammatory Diſpoſition of the Blood, that

ſhocks

ſhocks the tender Membrans of the Lungs, we muſt endeavour, by all means, to procure a gentle Diſſolution of this Inflammation, by emptying the Veſſels and exhibiting temperate *Alcali's*. If to the inflamed Blood you add the inflammatory Stings of Purgatives, eſpecially while the Diſeaſe is yet crude, you'll not only excite ſuch Motions of Nature as are downright contrary to your End, but, by exaſperating the Inflammation, ſuppreſs the Spitting, and heighthen the Difficulty of Breathing, till at laſt the Patient either dies or falls into a Conſumption.

II.

As Purgatives are very dangerous in Pleuriſies and the Diſeaſes of the Breaſt, ſo Diureticks are very uſeful. For in all Diſeaſes of the Breaſt, we are taught by the infallible Direction both of Nature and Experience, always to direct our Courſe to the urinary Paſſages. Indeed, in the Diſeaſes of the Head and Face, the ſame Direction teaches us to exhibit frequently gentle Purges, which are very ſerviceable, eſpecially if accompany'd with Baths for the Feet. To this purpoſe *Jacotius* ſays in his *Com. ad Coac. Hip. lib.* 4. *fol.* 212. *That the Belly is almoſt always coſtive in the Diſeaſes of the Head.* In ſpeaking thus of the Diſeaſes of the Head, I do not mean thoſe produc'd by the Acrimony, Convulſion, and too great Shock of the Solids or Fluids; but thoſe proceeding chiefly from the Groſſneſs, the Stagnation, and Ropyneſs of the Fluids. The chief Purge that gives Benefit in ſuch Diſeaſes, is the Powder of *Cornachinni*; and the principal Diureticks for the Diſeaſes of the

Breaſt

Breast are all the Preparations of Turpentine, prepar'd Hoglice, *Fernelius*'s Syrup of Marshmallows, and the Herbs that are commonly call'd *Aperient*. Considering that Acids are unfriendly to the Breast, we ought in this Case to avoid Diureticks prepar'd of Acids; as *Hoffman* upon *Schroder* has well observ'd, *Fol.* 376. where he disproves the Use of the Balsam of Sulphur in a Phthisick, and the other Disorders of the Breast, upon the Consideration that it abounds with an unctuous Acid, which rather increases than extirpates the Phthisick. Of which Truth, the experienc'd *Vasschinid* is likewise a Witness. But to drop this Digression: The Application of Blistering-Plaisters in the Case of *Delirium's* in Men, is nocive rather than useful; and is oftner follow'd by Death, than by Recovery. But, on the other hand, delirious Women receive such Benefit from Blistering-Plaisters that they mitigate both the Symptoms and the Disease, and prove a main Instrument of Health. This I observ'd at *Rome*, in the Beginning of the Year 1694; in which Season *Italy* was cover'd, in an unusual Manner, with Ice and Snow, and a great many dy'd suddenly; not to mention that feverish Catarrhs were then very rife, as well as moist Coughs, with a stuffing up of the Lungs, Colick Pains, *Peripneumonia's*, and Pleurisies, which seiz'd the Men more than the Women. When a *Delirium* is imminent, instead of applying a Blistering-Plaister, I use to open the *Salvatella* in the right or left Hand; and sometimes I apply scarrify'd Cupping-Glasses to the Shoulder-Blades. adjusting the Quantity of Blood drawn to the Age, Temperament, *&c.* of the Patient. The Opening of this Vein oftentimes prevents an approaching

proaching *Delirium*, or checks it very much if it has taken place already; the Impulſe of the inflam'd and ſharp Blood upon the Head, being either diverted by the Revulſion, or leſſen'd by the Evacuation of theſe Out-lets. After Bleeding I preſcribe large Quantities of Emulſions made with the Water of *Carduus Benedictus*, or Violet-Water, or Barly-Water: Sometimes I ſhift the Emulſions with diluting Decoctions of refrigerating Herbs, qualified with a convenient Quantity of Nitre. Of the nitrous Preparations, I recommend the Antimonial Nitre, or *Sal Prunell.* Sometimes the Ulcers rais'd by Bliſters are in Diſorder, thro' the Fault either of the morbifick Matter, or of an ill Habit of Body; in which Caſe they grow gradually dry, with a blackiſh or livid Colour, and threaten ſomewhat like a Gangrene. In ſuch Caſes, a preſent Remedy is Honey of Roſes, anointed upon them twice or thrice a Day. Upon the Inunction of the Hony the Patient will perceive an uneaſie pricking Pain, and a Sort of Effervescence, which proves a good Sign; for after a Day or two, a moiſture will appear upon the Ulcers, the Purgation of the Ulcers will be promoted, and the black Cruſt that formerly cover'd 'em will fall off, and ſoon after a reddiſh Fleſh will grow upon 'em.

III.

I have ſeen the good Effects of this Honey of Roſes, not only in the Ulcers of Bliſters, but in all other that tend to a corrupt and ſordid State. In *May*, 1693. I 'tended at *Rome* a young Man that had an ulcerated venereal Bubo in his Groin, with an acute Fever, Thirſt, Proſtration

stration of Strength, *&c.* The Ulcer was broad, painful, inflammatory, and cover'd with a black Cruft. As soon as I was call'd, I prescrib'd ten Ounces of clarified Goats Whey to be taken in the Morning; and at Night, an Emulsion of the Seeds of Melons and Gourds made with *Cardus Benedictus* Water, and mix'd with two Scruples of Crabs-Eyes. Instead of solid Eatables he eat, every six Hours, Broth impregnated with Alcalic Herbs, and the Yelk of an Egg added now and then. The Ulcer I order'd to be anointed twice or thrice a day with Hony of Roses. This Method continu'd for ten Days, discuss'd the Fever with its concomitant Symptoms, and the Hony cleans'd the Ulcer very well; so that upon drinking a slight Decoction of *Sarsaparilla*, *Guaiacum*-Wood, crude Antimony, *&c.* he recover'd perfectly. Here I must remark by the Bye, that a diluting Diet goes a great way in the Cure of Ulcers; particularly Decoctions of the alcaline, dulcifying, and balsamick Herbs, vulnerary Decoctions, and the like, prescrib'd in large Quantities. For by Vertue of such copious diluting Prescriptions, the sharp Salt of the Ulcers reigning in the Mass of Blood, is dulcify'd and blunted; and being thus diluted with a copious Fluid is readily expell'd by such Passages as Nature finds convenient, whether Stool, Urine, or Sweat; upon which the Blood thus dulcify'd and peurify'd, contributes highly to the Cicatrisation of the Ulcer. Now these Effects are not to be expected from Bagnio's, a drying Diet, sudorifick Decoctions, and the like; which by exalting and sharpening the pointed Salt of the Ulcers, reduce the Patient to a desperate State of Health, especially if his Body is not cachectick,

moiſt, pale, and of a looſe Conſiſtency; or if the Ulcers are not of that Nature. Indeed if they are, a cuſtomary Uſe of Drying things may be of ſome Uſe. In the Diſeaſes of the Eyes and Face, Bliſtering-Plaiſters apply'd to the Neck are as good as Specificks, and preferable to any other Remedies; particularly in a Suffuſion, and what is commonly call'd Rheums or Defluxions upon the Eyes. This I have frequently beheld with Admiration. Sometimes the Ulcers of Bliſters are hard to heal, even when the primary Diſeaſe is cur'd long before, and the Ulcers have made a ſufficient Evacuation of the morbifick Matter; nay, they continue open and running for many Months, in ſpite of all Remedies. In this Caſe, I have not met with a better Remedy than Frankincenſe powder'd very fine, and ſprinkl'd upon the Ulcer twice a Day. I have likewiſe found the Cicatrization promoted by Lint or toaz'd Threads, boil'd in the Decoction of crude Allom, and then dry'd and laid upon the Ulcer. But ſometimes, when the Body is very foul, I have found even theſe do but little Service.

IV.

Bliſtering-Plaiſters, *Sinapiſmus's* or inflaming Applications, Purgatives, and ſuch like ſtimulating Things, are not to be us'd in juicy and plethorick Bodies, and ſuch as are over-cram'd with Humors; unleſs the Veſſels be firſt clear'd, either by Bleeding, if the Indications require it, or by a ſevere Diet: For while the Humors are crouded, or move rapidly in the Blood Veſſels; the Secretion of the Fluids, in the Sieves of the *Viſcera* and other Parts, is perform'd

form'd either with Difficulty, or in a morbifick Way. For, by the Rules of the Mechanicks, a due Secretion requires not only clear Pores and a proportion'd Resistance of the Solids, but likewise a proportional Motion and Quantity of the Fluid that is to be strain'd out; and if either of these Conditions be wanting, the Secretion will be carry'd on in a præternatural Way; as I intimated before, in recommending Emulsions and refrigerating Remedies against a sleepy Disorder in the Beginning and Increase of ardent Fevers. The *Stimuli*, or pungent Particles of Purgatives, Blistering-Med'cines, and Diaphoreticks, raise in the Fluids a greater Fermentation, Turgescency, and Rapidity, and in the Solids a sort of lively Vibration; so that if the Humors are too plentiful in the Vessels, or be rais'd by violent Fermentations to the highest Degree of Turgency, by which Means they out-do the Resistance of the Solids, and variously pull, extend, and twist the Fibres of the *Viscera*: If this happens, I say, 'tis no Wonder if soon after we meet with Ruptures of the Vessels, and dangerous Fixations of the Fluids; a thing that daily Experience makes out sufficiently. For after an indiscreet and unseasonable Use of Purgatives, Blistering-Plaisters, Diaphoreticks, *&c.* there's nothing more frequent than an Exasperation of the Fever, *Delirium's*, Inflammations of the *Viscera*, convulsive Motions, spontaneous Bleedings, and the like; which, after all, would not happen, if such Remedies were not prescrib'd till after the clearing of the Blood-Vessels by the Means of Bleeding; for after the Humors are disengag'd, and circulate in more Room, 'tis impossible then for any Fermenta-

tion or Turgeſcency, excited by ſuch Med'cines, to ſhock the ſolid Parts, or make way for the Coagulation and Stagnation of the Fluids. 'Twas for theſe Reaſons, perhaps, that Dr. *Sydenham*, whom *Italy* admires ſo much, recommended ſo earneſtly the uſhering in all Purgatives, eſpecially thoſe of the ſtronger Form, by emptying the Veſſels with Bleeding or Diet, if the Diſeaſe gives time. This Author has likewiſe eſtabliſhed, upon repeated Obſervation, a Method of managing the febrile Fermentation of the Blood, as well as ſome other Authors of this Age. He was the firſt of the Northern Authors that reduc'd the ſlippery Method of the otherwiſe learned Northern Phyſicians, to the right Path of Reaſon and Experience; and, among other things, affirm'd, That ſuch as exhibit Purgatives in the Beginning of acute Diſeaſes, are equally guilty with thoſe who give Diaphoreticks in the ſame Caſe; upon the Conſideration, that the febrile Fermentation of the peccant Matter being then crude, confus'd, and unqualify'd for Depuration, is yet more diſturb'd and fretted by the additional *Stimuli* of Purgatives, Diaphoreticks, *&c.* and inſtead of a due Depuration, produces an Exacerbation or Reduplication of the Fever, Watchings, *Delirium's*, Inflammations of the *Viſcera*, convulſive Motions, and a thouſand ſuch Things. But of this more at large in our foregoing Books of Practice.

V.

From what I have premis'd, 'tis manifeſt that Bliſtering Remedies injoy a notable Vertue of diſſolving and attenuating groſs, coagulated,

lated, and ſtagnating Blood; and are ſpecifiks in a manner in Suffuſions, in Diſorders of the Eyes ariſing from a Flux of Humors, in Fevers proceeding from Coagulation, and ſuch other ropy Diſorders of the Humors. Now conſidering that ſtubborn Obſtructions of the *Viſcera*, *Cachexies*, and Chronical Suppreſſions of the Terms, are owing to that ſort of Blood, I would therefore exhort Phyſicians, in ſuch deſperate Caſes, to try *Cantharides* either in Plaiſters or any other more convenient Way, that the Cure of ſuch difficult Diſeaſes may be ſet in a more clear light. *Thomas Bartholinus*, *Cent.* 5. *Obſ.* 28. ſhews the Way of making an Infuſion of *Cantharides*, which he cries up as a Specifick for Curing a virulent Clap and ſuppreſſion of Urine, and expelling the Stone. The Preparation is as follows: *Infuſe a Scruple of the Powder of Cantharides in three or four Ounces of Rheniſh Wine, or Spirit of Wine: After they have been infus'd for ſome Days, filtrate the Liquor through brown Paper, ſo that none of the Subſtance of the Cantharides may go through; mix a Spoonful of the ſtrain'd Liquor with ſeven Spoonfuls of Wine or Ale, and take off this Mixture, one Spoonful the firſt Morning, two the next, and ſo on.* Now, whether this Remedy is to be given in Obſtructions, and the Diſeaſes mentioned but now, is what I have not yet put to the Trial. Thoſe who are ſubject to a grievous Cough, with groſs and copious Spittings, do not meet with ſo much Relief from any Remedy, as from a Bliſter applied to the Neck; and if the Ulcer of this Bliſter ſhou'd happen to heal ſuddenly, another may be apply'd behind the Ears, or upon the Shoulder-blades; for the ſerous Impurity ouzing from the Body of the Blood is diverted by the Bliſter from making that Im-

pulse upon the Lungs that occasion'd the Cough. This I observed in the Hospital, upon the Prescription of an old Physician: And Dr. *Willis* experienc'd it in his own Case. Having thus dispatch'd a brief and faithful Account of the Use of Blistering Remedies, the next Chapter shall be employ'd in giving a mechanical Account of the Manner in which they operate.

CHAP. IV.

The Nature of Blistering Med'cines is evidently demonstrated from the Mechanick Doctrine of the Stimuli.

§. 1.

BListering Remedies operate by Stimulating, and make the principal and most considerable Figure among what we call *Stimuli:* For a clear Understanding of which, I shall here present you with some short Hints, in imitation of *Bellini* in his learned Treatise *de Stimulis.*

My first Position is this: A *Stimulus* ought to produce a greater Effort in the Motions of the Parts, of which the whole Membranous System is compos'd, as also an Expression of any liquid Body, and its moving where it can.

I affirm, in the second Place, That upon the Operation of a *Stimulus* the Hairs or Fibres of the Membranes, that is of the whole Body, ought to be contracted with more Force than they naturally are; and by this Means, the Expression of the Liquids will be compassed more easily; For this greater Contraction will make the

Hairs

Hairs or the Threads ſhorter and harder, and withal ſtiffer and more bent; ſo that their Trembling or Vibration will be more lively, and the Excurſion of the Fluids, being within the Contact of the ſaid Fibre, will have a greater Force in the Diameter, and both the Efforts being increas'd, the Expreſſion of the Liquor will be facilitated, as well as its Derivation to what Place it can beſt come at.

My third Aſſertion is this: A *Stimulus* ought to add more Strength to the Contraction of the Muſcles, occaſion'd by the Liquids or Juices that run within 'em; by which not only the Expreſſion of the Liquors will be facilitated, but the Swiftneſs and Circulation of the Blood will be heighthen'd. For ſince the Force of a *Stimulus* raiſes the nervous Liquid to more frequent Undulations, ſo by Vertue of the Motion of Derivation, a more than natural Quantity of this Juice will be convey'd into the Nerves of all the Muſcles; by which Means the Muſcles will ſuffer a ſtronger Contraction, and make ſtrong Efforts outwards with their Hairs or Threads, and ſo ſqueeze out all the more liquid Parts that lye within the reach of their Contact; that is, that lye round them and within the Space in which they are ſucceſſively mov'd, while they ſuffer contraction.

My fourth Aſſertion is this: According to the Diverſity of the Part in which the *Stimulus* operates, it may either be redden'd without a a Swelling, or really inflam'd or neither ſwell'd nor redden'd; or it may ſwell with ſome other Tumour, and even evacuate a great deal of Matter that the *Stimulus* does not call to that Part.

I ſay, in the fifth Place; That the ſame things

would happen, if to the *Stimulus* were joyn'd a certain Faculty of piercing inwards, and preparing the Humors; but ſome Evils may likewiſe inſue thereupon, and thoſe of a quite different Nature from the *Stimulus* alone.

For a ſixth Poſition: If a *Stimulus* does not not only bend but pull aſunder, and be either ſimple or joyn'd with a Ferment, 'twill produce the ſame Effects as above.

The ſeventh Concluſion is as follows. Such is the Operation of an Evacuating and a ſimple or Unfermenting *Stimulus*; whether the Evacuation be made from the very part that's ſtimulated, or by the natural Emunctories, namely the Noſe, Mouth, Fundament, *&c.* Such I ſay, is its Operation that it may Evacuate not only what it expreſſes from the circulating humurs, but likewiſe the Matter ſquees'd out of the Subſtance of the Threads or Fibres of the ſolid Parts: And the ſame will be the effect of the *Stimuli* accompanied with a Ferment, ſuch as Bliſtering-Plaiters, *Sinapiſmus's &c.* For theſe and indeed all Stimulating things provoke every hair or Fibre of the ſolid Parts to avalid Contraction, and to an expreſſion of all that's in a fluid State. Now the fluid thus expreſs'd will move off where it finds a Paſſage. Whatever is ſquees'd out of any Veſſels will undergo a derivation out of them, and be convey'd between the Membrans, both upon their ſurfaces and in the interſtices of their Pores: But that whichouzes from the Fibres of the ſolid Parts, may be conducted within the Veſſels. Upon the whole, we conclude that the Evacuating *Stimuli*, tho' unprovided with a Ferment, may draw out both the Liquid expreſs'd from the Humors, and that

ſqueez'd

ſquees'd out of the ſubſtance of the Fibres either by the natural Emunctories, or by ſuch vents as are made in the Stimulated Parts.

Eightly. The unevacuating *Stimuli* move with a great force, and are able to make a mighty Diſſolution. The Evacuating *Stimuli* not joyn'd by a Ferment are capable of the ſame Effect, and beſides impair the quantity of the Liquids. Nay both the one and the other muſt needs dry very much. The evacuating *Stimuli* accompanied with a Ferment may produce the ſame Effect; but according to the Diverſity of the Ferment to which they are tack'd, they may either condenſate, melt down, coagulate, fix, or in fine do whatever you have a mind to.

A *Stimulus* makes a very notable Contraction, and the Contraction makes a very great Expreſſion of Fluids, even in the remoteſt Parts; ſo that a *Stimulus* makes a very great Impreſſion both upon the fluid and ſolid Parts. This argues the neceſſity of Stimulating Med'cines in ſuch Diſeaſes as proceed from a Coagulation and ropyneſs of the Humors, accompanied with a paralytick diſpoſition or laxity of the Fibres; notwithſtanding the falſe preposſeſſion of the Vulgar to the contrary. Further: The contraction of the Blood Veſſels being thus increas'd, 'twill alter the contact of the ropy Liquid that ſtagnats within 'em; and the Velocity of the whole Maſs of Blood being likewiſe increas'd, the Maſs will thereby have a greater force to ſweep it along the Canals, and convey it to the *Viſcera*, in which it may be further concocted and diſpos'd to an Egreſs.

The ninth Poſition. If the parts of the Liquid that beſmears the membranes of our Body, did all Preſs one upon another, and

make

make a mutual preſſure every way, as the particles of the Blood do within the Veſſels; by vertue of this Preſſure the Matter even of the moſt diſtant Parts might be drawn by Derivation and Voided by the Emunctories of the *Stimuli*. But ſuch a mutual Effort in theſe Liquids do's not ſtand to Reaſon.

In like manner, if the Skin and all the Membranes of our Body were naturally ſo bent and diſtended, as to contract all round upon the Stimulating or pulling of any one Part, and that in ſuch a manner as to make the Effort tend to the place of Divulſion, and drive all Liquids towards it, as the Bladder do's in preſſing forth the Urine: If this were the ſtate of the Membranes, their Contraction might convey to the Emunctory of the *Stimulus*, and evacuate by that Paſſage the Matter even of the remoteſt Parts: But ſuch a natural tenſion in all the Membranes, ſuch an Univerſal Contraction, and pointing of the impulſe towards the *Stimulus*, do not ſeem to be reaſonable. But at the ſame time the Matter Lodg'd in any Part may be mov'd by a diſtant *Stimulus*, if the *Stimulus* be plac'd upon a Nerve or any bent Membrane, that reaches to, and is woven in with that Part, and it may be Evacuated by the Emunctory of the *Stimulus*, if 'tis either within the Nerve, or can be convey'd thro' the Fibres of the Membrane; or if it be ſo reduc'd to that ſtate of Fluidity by the influence of the *Stimulus*, as to flow to the Emunctories. Above all, the moſt certain way by which the *Stimuli* act upon the moſt diſtant Parts, is that of Jogging, Stimulating, and ſearching the whole Body, and leſſening the whole Quantity. But you may read more of this Matter in

Bellini,

Bellini de Foliculo Contractili. Since therefore the *Stimulus* by vertue of its Contraction makes a Concuſſion, not only of one particular part, but of the whole Body, and ſqueeſes it all over, upon which the expreſs'd Liquid flows, wherever it meets with a paſſage, into the Blood Veſſels, and all round, and ſome of it is evacuated by the Emunctories. Now the quantity of the whole being thus impair'd by this Evacuation, queſtionleſs the affected Part, tho lying at a diſtance, will be viſited by a leſſer Croud. So that, in ſuch Diſeaſes as are ſaid to proceed from Defluxions, namely ſome Catarrhs, Suffocating Coughs, and thoſe occaſioned by roapy tough Matter, the Diſeaſes of the Eyes, particularly Suffuſions, ſome periodical Pains, *&c.* In all Diſeaſes retaining to the Stagnation and ſtubborn fixation of the Humors, ſuch as Apoplexies, Palſies, Sleepy diſorders, Obſtructions, *&c.* In theſe, I ſay, and the like Diſtempers, the main ſtreſs of the Cure will for the reaſons above-mention'd lye upon the ſtimulating Effects of Bliſtering-Plaiſters, or ſome ſuch Stimulating Med'cine; and it muſt needs be a very criminal thing to omit Bliſtering-Plaiſters in ſuch Caſes, in complyance with ſpeculation, or receiv'd Hypotheſes.

My tenth Aſſertion runs thus. When we apprehend any danger of an overbearing Afflux of Humours to a ſtimulated Part, our ſafeſt way is to apply the *Stimulus* at a diſtance from the Part that we mean to evacuate. But if no ſuch danger be feared, we may apply it juſt by the Part. Many *Stimuli* are better than a few, when 'tis proper to excite lively Motions and brisk Vibrations or *Oſcillations* in the Fibres; and in this Caſe, the *Stimuli* ought not to be confin'd to a narrow ſpace. When the Pain and Senſe

of

of the Stimulation ceaſes, we muſt either repeat the Application, or rub up the Wounds it gave. If we deſire a ſudden and evident benefit from Stimulating Med'cines, we muſt make 'em numerous, Large, and Sharp; and whatever Heating, or Drying inconveniencies may thereupon inſue in the Body, muſt be mitigated with moiſtening and cooling things taken in large Quantities, which will likewiſe ſerve to appeaſe the provok'd Spiris. Accordingly we find it atteſted by ſeveral Hiſtories, that diſmal Sleepy Diſorders, Apoplexies, and the like, have been took off almoſt in a Minute of Time, by applying a large Bliſtering-plaiſter all over the Head, the Hair being firſt ſhav'd off. But when the Stimulation is to be continued for a long Time, we make 'em leſſer and fewer, for the Reaſons above-mention'd. From all which, we make this Inference, That Stimulating Med'cines make a great Agitation and Conſumption of the Spirits; as 'twill appear more plainly from what follows.

The eleventh and laſt Poſition is this: Tho' ſtimulating Med'cines may ſupply the Room of Bleeding, and operate as expeditiouſly, eſpecially if they are very ſharp, yet they are not ſo ſafe as Bleeding. But at the ſame time, I muſt own they have ſomething peculiar in 'em that is not obtain'd by Bleeding; for they move, contract, and ſhake the whole Body, and at once excite and joſtle both the fluid and the ſolid Parts.

From all theſe Propoſitions we might deduce an Infinity of practical Corollaries, to ſet the Benefit and Injuries of ſtimulating Med'cines in a clear Light: But conſidering that the learned *Bellini* has purſu'd that Subject with ſo much

much Solidity, and given an evident Reaſon for every Propoſition, I ſhall content myſelf with a few Hints relating to the Cure of Diſeaſes.

II,

Some *Stimuli* are ſingle or ſimple, and ſome are accompany'd with a Ferment. The former are ſuch as impart none of their Subſtance to the Humors within, when they tear, redden, and pain the Part; ſuch are ſearing with a hot Iron, Frictions, Cupping-Glaſſes, whether ſimple or ſcarify'd, and the like. Thoſe accompany'd with a Ferment, are ſuch as communicate ſomething to the Humors; as Bliſtering-Plaiſters, *Sinapiſmus's*, *Dropax's*, and the like; the ſharp Particles of which do at once twitch the Part, and joyn the Blood, and forcibly diſſolve, open, and jumble its Maſs. Both theſe *Stimuli* make a violent Agitation of the Solids, as well as the Liquids; (only the fermenting Sort make the greateſt;) and the Solids thus toſs'd make a more forcible Impreſſion upon the Liquids, which being thus preſs'd come with a greater Shock upon the Solids; and ſo there inſues a mutual Preſſure and Rebound, which makes ſeveral Parts of the Liquids, between two neighbouring Parts, or upon the outter Surface of two that are not contiguous, to bend their impulſe inwards; by which Means the Coherence and Mixture of their Parts, is either ſunk or eſtabliſh'd. The ſame muſt be the Influence of Solids upon their own Parts, of Liquids upon Solids, and of Solids upon Liquids; that being the Conſequence of their mutual Action and Reaction. 'Tis therefore a

ſtanding

ſtanding Truth, as I have oftentimes inſinuated that the ſolid Parts are much ſhak'd and diſſolv'd by the *Stimulus*; and that the ſame *Stimulus* affects the Liquids with an Agitation, Diſſolution, Mutation of Contact, and a violent Expreſſion and Derivation whereever a Paſſage is found. In regard theſe Actions conſume a great deal of Moiſture, and weaken the Spirits, we ought to prevent ſuch Inconveniences by moiſtening and corroborating Preſcriptions; for, otherwiſe, the ſtimulating Med'cines will fall ſhort of their deſir'd Effect.

The Mechanicks are Evidence that Bliſtering-Plaiſters are the principal *Stimuli*, and have a juſt Claim to all the Effects now mention'd: And therefore 'tis credible that ſome Diſeaſes can ſcarce be cur'd without Bliſters, and that others will be exaſperated by the unſeaſonable Uſe of the ſame. They are not preſcrib'd ſo much for leſſening the Quantity of the Humors and drawing out the Malignity, (as ſome fancy) as for diſſolving and moving the coagulated, groſs, and ſtagnating Humors, and drawing them from the Part affected to the Emunctory of the *Stimulus*. For what they evacuate is inconſiderable and inſufficient to leſſen the Quantity of the peccant Matter. Perhaps ſome Body may ſtart the Queſtion, Whence the Humors come that are thus evacuated by a Bliſtering-Plaiſter? I anſwer, they are thrown out partly from the Pores and Glandules of the Skin, and partly from the Ends of the Arteries and the Extremities of the nervous Fibres; and, after the Action and Vibration of the *Stimulus*, from the whole Body and all the remoteſt Parts, as I ſhew'd above: For the *Serum*, impregnated with the ſtimulating Particles of the Med-

'cine,

'cine, is ſeparated very quickly and pull'd aſunder (as 'twere) in great Plenty from the reſt of the Maſs of Blood; and at every turn of the Circulation, a great Quantity of it is thrown out by the continually irritated Ends of the Arteries; upon which Occaſion the other morbifick Particles are ſeparated and evacuated along with it. And farther, the Extremities of the Nerves being laid bare, and irritated by the Application of a Bliſtering-Plaiſter, 'tis probable ſomewhat is likewiſe thrown from the Nerves upon the ſtimulated Part; for the whole nervous Liquor being put into a Commotion by the *Stimulus*, is cur'd of Stagnation; and at the ſame Time the heterogeneous Particles mix'd with it being toſs'd on all Hands, and drawn by Derivation from the Brain, ſlide gradually towards the new open'd Emunctory, and ſo are thrown out.

From what has been ſaid, we conclude, That the principal Diſeaſes in which Bliſtering-Plaiſters are more proper than in other Diſtempers, are, malignant Fevers ariſing from the Coagulation and Viſcidity of the Humors, ſleepy Diſorders, Catarrhs retaining to a viſcid Matter, and threatning an Irruption upon the Lungs, or any other noble Part, or upon the Noſtrils, Eyes, Throat, Breaſt, *&c.* fix'd and tearing Pains in any Part, ſome cutaneous Diſeaſes and erratick Pains, Convulſions without Fevers, Epilepſies, and ſuch other Diſorders of the Nerves; and in a Word, all Caſes in which 'tis proper to diſſolve, twitch, move off by Derivation, excite, or the like, with due Regard to the Genius of the Diſeaſe, aud the Dictates of Experience.

DISSER-

DISSERTATION III.

Containing Several

Anatomical and *Practical*

OBSERVATIONS.

The PREFACE *to the* Reader.

OF all the Enquiries and laborious Adventures of Anatomiſts, I reckon none more uſeful for the illuſtrating of the Ætiology of Diſeaſes and the Structure of an animated Body, than the Infuſion of Liquors into the Veins or Viſcera *of live Animals; the Death of which does ſo alter the Syſtem both of the ſolid and the fluid Parts, that ſometimes they appear quite different from what they were before, and ſometimes are hid from our View: Whereas the Experiments we make upon living Animals by way of Infuſion, afford a clear and unfeigned Repreſentation of the Effects that proceed from thence. To ſpeak ingenuouſly, all the Diſcoveries made by Anatomiſts in theſe Days, either in* Italy *or the more Northern Countries, are owing to the Diſſection of live Animals. Upon this Conſideration, I ſtand amaz'd that this Age applies themſelves*

ſo

so little to the Art of Infusion, by which they might bring to light so many unknown Things, relating both to the Nature of Diseases, and to the Constitution of an animate Body. Many learned Anatomists have pursued it with Prudence and Discretion, and have describ'd the Syringe and other Instruments imploy'd in the Performance; but even these stuck at the Threshold and went no further. Having these Things fix'd in my View, I chose to inlarge this Book to a just Bulk, by subjoyning these four Experiments that lay scatter'd and rough drawn in my private Notes; and at the same Time, to gratifie the Anatomists, I have added the History of the Dissection of Malpighi's *Corps, which I perform'd at* Rome *last Year; and in regard I 'tended him in his Illness, I have likewise put in a short History of his Distemper. I have likewise added some Remarks of an Apoplexy that was almost Epidemical, for the last two Years, not only in* Rome *but all over* Italy; *designing some Time hereafter to make a particular Dissertation of that Sickness, and of the Dissections of the Corps of such as dy'd of it. This is what I thought proper to premise.*

Rome, *Nov.* 29. 1695.

A Collection of Experiments made by the Art of Infusion upon Living Animals.

EXPERIMENT I.

ABout 10 Years ago, I took a great Dog at *Naples*, in the Month of *July*, and opening his jugular Vein in the Afternoon, I injected into it with a Syringe half an Ounce of the Spirit of Vitriol. As soon as I had clos'd and swath'd up the Wound, the Dog was seiz'd with a Shivering and Shaking, he vomited and threw out great Plenty of Spittle, he fell down upon

the Ground, was breathleſs, and ſomewhat touch'd with Convulſions; after a few Hours he dy'd. When I cut up his Carcaſe, I found all his *Viſcera* of a blackiſh Colour, and a great Quantity of black and clotted Blood in the Heart; the Blood in the Lungs was likewiſe clotted, but every thing beſides was ſound.

A COROLLARY.

I meet with few Authors of this Age that treat of the Art of Infuſing of Liquors into the Blood or Veſſels of a living Animal, or lay down the Method of going regularly about that Art, notwithſtanding that the nature and Cure of Diſeaſes might be mightily illuſtrated by it. If we take a narrow view of all the Accidents that happen to an Animal after this Infuſion of Liquor, relating to any functions of Life, or any of the Bowels or Parts of the Body: by a juſt Parallel we may apprehend that *that* Infuſion preſcrib'd to Patients might produce the like Symptoms in human Body. 'Twou'd be a great Improvement of the Practice if any Society or Body of Learned Men would purſue theſe Experiments of Infuſion, by proceeding gradually to various Liquors, and eſtabliſhing a Method in making their Experiments, and then digeſting them into one Body, as the famous *Mangetus* has done in Anatomical Matters, in that golden Book of his, entituled, *Bibliotheca Anatomica*. My Learned Friend *Lanzonus* Profeſſor at *Ferrara* is Evidence, That the ſame Method is neceſſary in Practical Things.

EXPERIMENT II.

Rome, *Jan.* 30. 1693. I view'd the right crural Vein of a young Dog, near the Groin, and infus'd with a Syringe, two Ounces of rectify'd Spirit of Wine. After the Injection, the Dog

ſhiver'd

ſhiver'd and ſhook all over for half a quarter of an hour, then he voided Urine in great Plenty, and was well as to all the Functions of Life. I cut him up afterwards, and found all the fluid and ſolid Parts in a natural State.

EXPERIMENT III.

Having tied a young down upon a Table, I open'd his right Jugular, and infus'd two Ounces of the rectify'd Spirit of Wine; but the Injection was ſcarce over when the Dog expir'd. In cutting up his Carcaſe, I found the Blood very much clotted and coagulated in the Lungs: But all the other parts were ſound.

A COROLLARY.

The two laſt Experiments teach us, what different Effects the ſame Med'cines may have upon the humours, according as they are apply'd to this or that Part, internally or externally, *&c.* For, conſidering that the Blood returning from the whole Body, ruſhes continually and in great plenty into the Lungs; 'tis no wonder, That the Spirit of Wine thrown immediately by the Jugular Vein into that great Ocean of Blood, coagulated it immediately, and occaſion'd ſudden Death: for ſpirit of Wine thickens the white of an Egg very remarkably; and being held in the mouth makes the Spittle as thick as Glew. *Etmullerus Tom.* 1. *de Nutr. & Auct.* and *Bohnius cap. de Somn. & Vigil.* affirm, That Spirit of Wine produces the ſame Effects in the Blood and Spirits. Now the ſame Effect could not enſue upon the Injecting of Spirit of Wine into the Crural Vein, for there being but a ſmall Innundation in that part, which moves with a continued Velocity to the Heart, without any ſuch ſtay as is obſerv'd in the Lungs; the coagulating Vertue of the Spirit is eaſily enervated and broken, before it arrives at a larger Chan-

nel, where by vertue of the great Quantity, and the slow Progression, it might otherwise produce a Coagulation and fixation; and so its vertue is quite sunk upon repeated Circulation.

This may furnish us with a Reason, why several Diseases after causing various Inconveniencies in divers parts of the Body, terminate at last in Disorders of the Lungs and Kidneys: The Reason is this; The Blood thus tainted with Morbifick Particles, and being oblig'd in course to visit these two *Viscera* more frequently and copiously than any other, can't but finish its fatal Tragedy, there occasioning Ulcers, Coagulations or Gangrenes, or affecting them many other ways. For this Reason we ought always to take care of the Lungs and the Kidneys in Diseases of long standing.

EXPERIMENT IV.

In the beginning of 1691. I laid open at *Padua* the Jugular Vein of a young Dog, and injected with a Syringe four Ounces of cold Water. After the Wound was done up, the Dog was siez'd with an universal Shivering and Shaking, but he liv'd and did well.

EXPERIMENT V.

Padua 1691. being assisted by the worthy Mr. *Fardella* Professor at *Padua*, I took a large Dog, on Thursday, at 4 a Clock in the Afternoon, and making an Incision under the right *Hypochondrium*, put a strong Ligature upon the descending Trunk of the *Arteria Magna*, and the *Vena Cava*, and by chance we likewise tied the right Ureter. After the Wound was sew'd and bound up, the Dog vomited thrice, and then he fell down for dead; in which condition he lay without the Accession of any other Symptom till next Friday, on which he dy'd about 6 a Clock in the morning.

Upon

Upon opening his *Abdomen* we found a sort of swathe or streak of a yellowish green Colour, and two Fingers in breadth, ran length-ways all along the Intestines. His *Diaphragm* was somewhat inflam'd. The Bile was all thrown out of the *Gall-Bladder*. Having laid open the right Kidney, we found a prodigious quantity of *Serum* floating all over the Substance of the Kidney. The Blood in the Heart was extream black. All other things were in a natural State.

EXPERIMENT VI.

Rome Jan. 20. 1693. in a Hospital at *Rome*, I cut up the Corps of a Woman of 50 Years of Age, that dy'd of an Inflammation of the Colon; and found a Branch of an Artery running from the Trunck of the descending *Arteria magna*, that was inserted into the right Ureter about the Middle. But I was so Hurri'd by the Servants of the Hospital, that I could not make any observation, whether this Artery was hollow, or rather harden'd into a Ligament, as the other frustraneous Parts are wont to be. Neither could I inform my self, whether this Woman had ever been troubled with a pissing of Blood, and the other diseases of the Kidneys.

EXPERIMENT VII.

At *Bologna*, I laid open the Throat of a little Dog (one of those call'd *Corsetto di Bologna*) and tracing the Carotid Arteries, separated from 'em the Nerves of the *Par vagum* that descend on each side of the Neck, and cut these quite thro' the Middle. The Amputation was no sooner perform'd, than the Extremities of the Nerves, were contracted towards the inner Part of the Muscles. However we sew'd and ty'd up the wound. Presently the Dog became Mute, and was ever afterwards uncapable either to Bark or Howl; but he was brisk

and walk'd well, only he was ſeiz'd by intervalls with a difficulty of Breathing. From thence to the third and fourth Day, he vomited up whatever he eat, and grew very lean; from the *4th* to the *9th* Day, he eat little or nothing; and look'd like a Skeleton. The *9th* Day in the Morning, he howl'd and bark'd Prodigiouſly, tho' he had been ſo long mute before. At laſt, being waſted by not eating, he died on the *12th* Day.

Having cut up the Carcaſe, I found all the *Viſcera* clear and ſound: Only the *Oeſophagus* or Gullet was ſtuff'd for its whole length, with the Meat he had formerly eat, and ſo was very much Swell'd, for the Meat had no paſſage into the Ventricle. *Willis* made the ſame Experiment upon a Dog, as he tells us, *Tom.* 1. *cap.* 24. *De Nerv. Hiſt. & Uſu.* But he did not cut, but only ty'd the Nerves with a thread, and ſo 'tis no wonder the Symptoms he obſerv'd, are different from thoſe now mention'd.

A COROLLARY.

All the World knows, that the Nerves which viſit the Heart are deriv'd from the Trunk of the *Par vagum*; and conſidering that in the foregoing Experiment I cut quite thro' both the Trunks of the *Par vagum*, I wonder how this Animal could live, and the Heart retain its Pulſation for ten Days, after the Intercourſe of Spirits to the Heart was thus cut off. *Willis* aſſerts that beſides the branches of the *Par vagum*, ſome twigs of the intercoſtal Nerves viſit the Heart, and ſupply their room. But upon a narrow Scrutiny in ſeveral Dogs, I could never diſcry 'em: and ſo I leave the matter to better Heads.

EXPERIMENT VIII.

I joyn'd at *Bologna* with my learned friend *Gulielmini*, Profeſſor in that place, in ſeparating nicely the Nerves of the *Par vagum* from the Carotid

Carotid Arteries of another Dog, and tying them ſtrongly with a doubled Thread. Some Authors tell you, that upon making this Experiment, the Dogs are preſently ſeiz'd with an Apoplexy, but we obſerv'd no ſuch thing. Soon after the Wound was ſew'd up the Dog grew ſtupid, and could not ſtand upon his legs, but reel'd from ſide to ſide. However he continued pretty well to the 5*th* Day, only he eat or drank little or nothing. On the 7*th* day he died.

In diſſecting the Carcaſe we found no extravaſation of Serum, no ſwell'd Veſſels, nor any marks of inflammation of the Brain. About the natural and vital *Viſcera*, we met with great fixations and coagulations of the Blood. Every thing elſe was in a natural State, Which makes me apprehenſive, That when Authors make this Experiment, they tye up along with the Nerves, the adjoyning Carotid Arteries, and that makes the Dogs Apoplectick.

EXPERIMENT IX.

At *Rome* I cut a ſpleen out of a Young Dog, and heal'd the Wound very carefully. The Dog did well, he eat and urin'd well, and ſeem'd to be in a perfect ſtate of health, to the 40*th* Day, on which we kill'd him, and in cutting up his Carcaſe, could diſcover nothing new.

EXPERIMENT X.

A large hunting Dog, 5 years old, being accuſtom'd to ſwim frequently in Lakes and Rivers in queſt of Fowl, fell into a deſperate Cough, and a *Coryza*, which caus'd a grievous Suffocation. He broke out twice a year, that is, in *April* and *November*, in a filthy Scab or Mange. After he had continued thus ill for three years, and was waſted to a Skeleton, we deſign'd him for an Anatomical ſubject, and for that end fed him heartily before we

Dissected him. About 5 hours after he had eat, we cut up the Abdomen and the Breast the Dog being still alive, and found all the *Viscera* in these very well condition'd, and particularly the Lungs, where we thought to have met with the cause of his Cough, *Coryza*, Leanness and other Symptoms; but we could meet with no Morbifick thing, not in the Glandules of the Mesentery which we view'd very cearfully. At the same time we observ'd the lacteal Veins very numerous in the Mesentery near the small Intestines; and neer the lacteal Veins there run lymphatick Vessels, one of which I cut, and tasting the Lymph found it to be very sharp and Extream biting upon the Tongue. I have tasted such a saltish sort of Lymph, not only in this, but in other *Animals*. The Lacteal Veins, especially those of the larger size, were knotted and represented Branches of Knot-Grass; the knots I speak of were their Valves, and were frequent, after the same manner as those of the Lymphatick Vessels. I view'd likewise *Pecquetus's Receptaculum*, the Thoracick Duct *&c*: Tis observable, that when the Steams which exhal'd from the *Viscera* of the Dog, when just Dissected, reach'd the Flame of the Candle that we made use of in the Operation, the Flame crackled as if the Powder of Bay-salt had been thown upon it. In fine, there being no observable defect in the *Viscera* and Lungs, I was of the opinion that the *Coryza*, Cough, danger of Suffocation, *&c.* were owing either to a carious Ulcer of the inner Parts of the Nose near the sieve-like Bone, or to the great Acrimony and Saltness of the Humors that continnually irritated and gall'd the above mention'd Parts.

EXPE-

EXPERIMENT XI.

Of the Circulation of the Blood in a Frog.

Open with a pair of Pincers, firſt the Belly of the Frog, and then the Breaſt; you'll preſently ſee the Meſentery and Inteſtines ſtart out in the Belly, and the turgid reddiſh Lungs in the *Thorax*. In the Coats of the Meſentery, you'll obſerve ſome reddiſh Veſſels ſcatter'd up and down, and theſe are the Veins and Arteries that nouriſh it. The Veins of Frogs are larger and thicker than the Arteries; but the latter beat, which the former do not. Both the one and the other are pellucid and tranſparent; and by the help of a Microſcope you may gratify your Eyes with the pleaſant view of the Motion and Ebullition of the Blood within their Cavity, of the poſition of the conſtituent parts of the Blood, and a great many very curious things. What Diſcoveries I've made of this nature ſhall be now related.

Having cut up the Belly in the middle, take the Inteſtines along with the Meſentery while they are yet ſticking to the Frog, and minding one of the red Veſſels that runs along the Meſentery, put aſide the Inteſtines gently with your Fingers, that the reddiſh Vein may appear the better. When the Vein is fully diſcover'd, hold it againſt the light of the Sun, along with the Frog, and with a Microſcope of one Glaſs in your hand view the effects of the Blood contain'd in the Veſſel.

By this Method I obſerv'd the following Particulars. The Blood makes a Progreſſive Motion in the Veſſels with great velocity; and moves as 'twere in ſo many ſtraight Lines, like a lay of the fineſt and moſt ſwift Threads of Silk. Theſe right Lines run with greater celerity in the middle of the Veſſel than near the ſides;

ſides; and the nearer they are to the ſides, the more their velocity is impair'd. When the Frog is near to death, theſe right Lines of Blood move with a ſlower Current, and inſtead of a Progreſſive Motion, fly out ſide-ways, and ſeem to joſtle and confound one another. To make the Frog live longer, and ſo prolong the Obſervation, you may only open the Belly, without touching the Breaſt.

In the Veins about the Meſentery I obſerv'd a retrograde Courſe in the Blood; for the Blood that ought to have mov'd thro' any Vein upwards, ſteer'd its Courſe downwards, and fell into the next Trunk, which ſeems to run counter to the Rules of Circulation and of the venous Valves. To come at certainty in this matter, I ſlighty anointed the ſurface of one of theſe Veins of the Meſentery with Oil of Vitriol; upon which the Flux of the Blood thro' that Vein was preſently ſtop'd, for it retir'd to the next Veins, and ſo to a greater Trunk, as if there had been no Valves to oppoſe a retrograde Motion.

When the Frog is at the point of death, the Circulation of the Blood in the Veſſels is retarded; but if it be ſeiz'd with Convulſions, or mov'd by pinching, preſently the Circular Motion is recall'd, and the Blood beginning to flow again from the Parts to the Center, continues ſo to do while the Convulſions or Motions of the Frog are continued; otherwiſe it ceaſes. When the Frog is juſt a dying the Arteries begin to empty, and the Veins to ſwell. As ſoon as 'tis dead, the Arteries are quite empty, and the Veins ſwollen. The ſmall quantity of Blood that remains in the Arteries, ſeem'd to be compounded or conſiſt of ſo many fattiſh Globules or very little Balls adhering to the ſides of the Artery. And theſe Globules of Fat appear more

more plentifully, if you take a Frog and kill it as ſoon as 'tis catch'd; for then 'tis well fed and the Veſſels are more turgid. But if you keep it for ſome Days without feeding it, you'll perceive but a very ſmall quantity of 'em, when the Arteries are empty'd by Death.

If you take out the Heart of a Frog and lay it upon a Table, 'twill beat with a regular Syſtole and Diaſtole for half an hour after, and ſometimes for a whole hour, eſpecially if it be expos'd to the heat of the Sun. Nay, if you cut the Heart in pieces, theſe very pieces will ſhew you the regular ſucceſſion of Syſtole's and Diaſtole's. If theſe reciprocal motions grow weak and low, you may revive 'em preſently with the prick of a Needle, or by breathing upon 'em, or elſe by expoſing 'em to a hot Sun.

Tho the Heart and all the natural and vital *Viſcera* are taken out, the Frog will ſtill jump, and move 'its eyes, and ſhrink when 'tis prick'd: and that for an hour after. Nay I have ſeen it do all this and even Swim in Water for ſeveral hours after the Heart was taken out.

The motion of the Blood whether Inteſtine or Circular is not perceiv'd any where ſo diſtinctly, as in a Frog, not only by reaſon that the Blood Veſſels of this Amphibious Animal are Tranſparent, But likewiſe becauſe it lives longer under the Anatomical Knife, and is eaſier handled, and its *Viſcera* and Veſſels are more conveniently put under a Microſcope; by which means, the Obſervation is prolong'd. and more time is allow'd for tracing the truth, the Blood is obſerv'd to move further and further at every pulſation of the Heart, and like one wave preſſing another to be drove from the leſſer to the greater Veſſel, and from thence to the *Vena Cava*, and ſo to the Lungs. But we

are

are not ſo happy in viewing the circularion of the Blood in the Veſſels, that lead to the Head and Eyes above the Heart, as in the Veſſels of the natural *Viſcera*; for we do not deſcry ſo many ramifications of the Veſſels in the former, as we do in the latter; or if there are any, they are tore in Diſſecting the Breaſt, or at leaſt if they are not rent, they run ſuch a winding courſe thro' the Bony Parts of the Breaſt Neck and Head of the Frog, that 'tis a hard matter to ſet 'em before a Microſcope. In order to an eaſy and convenient view of the courſe of the Blood in the Veſſels, of the natural and vital *Viſcera*, take care you do not tear the Belly too much with your Pincers, for if you do you'll cut ſeveral Blood Veſſels, and ſo the Circulation will be obſerv'd, either with difficulty or for a very ſhort time. In making theſe Experiments, you muſt make uſe of a Microſcope of one Glaſs, holding it in your right hand, and taking a nice hold of the Frog with the Fingers of the left hand, ſo as to hold it againſt the Light. 'Tis obſervable, That a Frog lives without any Inconveniency in Mr. *Boyl*'s Air-Pump, notwithſtanding the Air is all pump'd out; but if you rub liquid Pitch upon the back or head of a Frog, it dies preſently, as *Bartholinus* experienc'd ſeveral times, *in Tract. de Palmon.*

In a Frog, Tortoiſe, and other Amphibious Animals, we find but one Ventricle in the Heart, to which the Blood is convey'd by a Vein, and carry'd out by an Artery. In the egreſs of this Artery from the Heart we meet with a Valve of the ſame form with the *Epiglottis* which favours the Egreſs and oppoſes, the Retreat of the Blood.

Tho' a Frog will live and move for ſeveral hours after the Heart is taken out, as I intimated

mated above; yet it dies preſently, and all Motion ceaſes upon the removal of the Brain and Head. Now the contrary is ſeen in the hotter Animals; a Pullet for inſtance, the Heart of which beats for ſeveral Hours after the Head is taken off.

To the Kidneys of a Frog on each ſide there adheres a great many oblong Baggs, fill'd with an Oily Subſtance, which ſtick cloſe to the Trunk of the *Vena Porta*, near the Liver, and ſerve only as the Fat of the Kidneys, and to ſupply the room of the Caul,

The Hiſtory of the Sickneſs of Marcellus Malpighi, *the Pope's Phyſician; with an Account of the Diſſection of his Corps.*

HAving been intimately acquainted with Dr. *Malpighi* at *Bologna*, and waited upon him in his laſt Illneſs at *Rome*, I ſhall here oblige the learned World with a Hiſtory of the Diſeaſe, and an Account of the Diſſection of the Corps of that excellent Anatomiſt.

Marcellus Malpighi was of a Conſtitution that tended to a Dryneſs, an indifferent Habit of Body, and a middling Stature: He had been ſubject for many Years to Vomitings, bilious Stools, Palpitations of the Heart, Stones in the Kidneys and Bladder, a piſſing of Blood, and ſome light Touches of the Gout. Upon his coming to *Rome*, all theſe Diſorders were inflam'd; eſpecially the Palpitation of the Heart, the Stone in the Kidneys, and the very ſharp biting Night Sweats. Such was the Condition of *Malpihgi*, July 25*th*. 1694; at which Time he was ſeiz'd, in the 66*th*. Year of his Age, about 1 a Clock in the Afternoon, with an Apoplexy, uſher'd in with Care, Paſſions of the Mind, &c. The Apoplexy was attended with a Palſie of the whole right Side, and a Diſtortion of the Mouth and right Eye.

Preſently

Preſently we try'd ſeveral Remedies, particularly Bleeding in the left Arm: If it had not been for the contrary Sentiments of the Phyſicians that conſulted with me, I would have order'd the Blood to be drawn from the paralytick Arm; upon the Conſideration, That the defective Circulation of the Fluids in the Part affected, is not retriev'd by any ſpeedier Method than that of opening a Vein in the ſame; as it appears plainly from the mechanical Principles of Reſiſtance and Motion. We preſcrib'd at the ſame time ſcarrify'd Cupping-Glaſſes, to be applied to the Shoulder-Blades; the Powder of *Cornachini*, *Sinapiſmus's* to be apply'd to the Soles of the Feet; and ſeveral other ſpirituous, cephalick, and ſpecifick Remedies; by the Uſe of which, after ſtruggling 40 Days with a long Train of grievous Symptoms, particularly a Light-Headedneſs, a *Capiplenium*, and other Accidents, he got clear of the Apoplexy, and Palſie, and the above-mention'd Symptoms. But as Evils uſe to ſpread and gain Ground, ſo this famous Man ſuffer'd much by the fore-going Diſeaſe in his Memory and Reaſon, and melted into Tears upon the ſlighteſt Occaſion. He was troubled by Intervals with Inappetency, a Want of Digeſtion in the Ventricle, a ſubſultory Motion of the Muſcles, and ſlight Fits of a Giddineſs. In fine, being worn out with theſe and other Symptoms, he was ſeiz'd, *Nov.* 29. with a freſh Fit of an Apoplexy, after the Injection of a cuſtomary Glyſter in the Morning: This new fit was uſher'd in by a grievous *Vertigo*, with a fit of the Stone in the Bladder for eight Days, and an Exaſperation of the above-mention'd Symptoms. But the Apoplectick Fit was more diſmal than all the other Symptoms, for in ſpite of all Remedies what-

whatsoever, he dy'd four Hours after the Invasion.

The Dissection of the Corps.

In Dissecting the Corps, I found the right part of the Lungs somewhat flaggy and livid, especially the hinder part that adheres to the back. The Heart was larger than ordinary, especially the Walls of the left Ventricle, which were as thick as the Breadth of two Fingers. The Gall in the Gall-Bladder was very black: The left Kidney was in a natural State, but the right was half as big again as the left, and the Bason of it was so much dilated, that one might easily thrust 2 Fingers into it. Perhaps this Dilatation of thePelvis was the Occasion that as soon as the Stones were bred in the Kidneys, they presently slipt into the Bladder, and so sprung out from thence; which our excellent Friend had frequently own'd to me to be a Matter of Fact. In the Bladder we found a little Stone that had descended thither four Days before the Invasion of the last Apoplectick Fit, and by its Descent exasperated his last Vertigoes. The rest of the natural *Viscera* were very well condition'd.

When I open'd his Head, I found, in the Cavity of the right Ventricle of the Brain, an Extravasation of about 2 Pints of black clotted Blood, which was the Cause of his Apoplexy and his Death. In the left Ventricle we found about an Ounce and half of yellowish Water, with a small Quantity of little Grains of Sand mix'd with it. The Blood-Vessels of the Brain were dilated and broke on all Hands. The whole Compass of the *dura Mater* adhered tenaciously and præternaturally to the *Cranium*. And this is the Sum of what I observ'd in Dissecting his Corps, *Dec.* 7. 1694.

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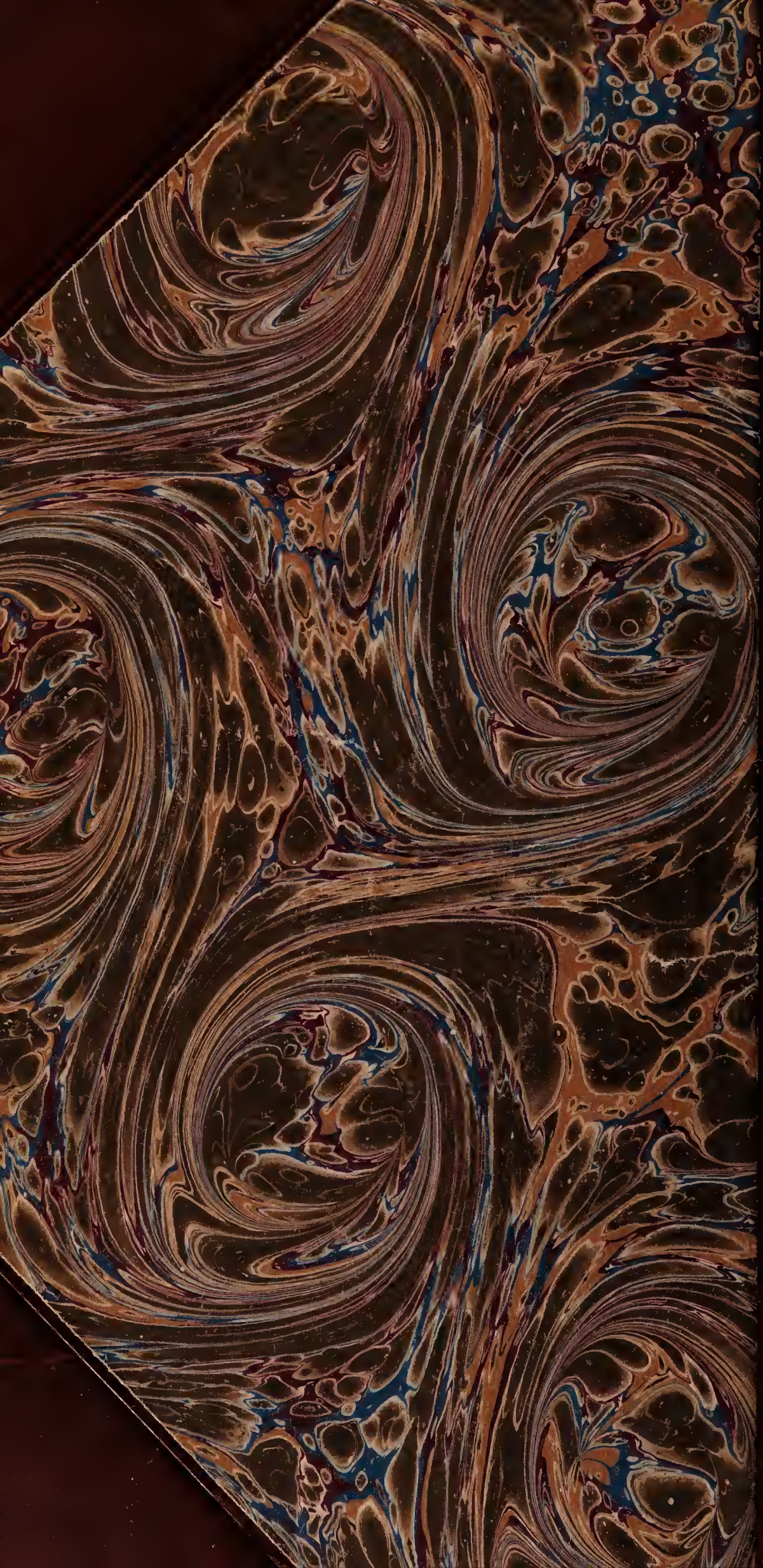
An APPENDIX *of the Apoplexies that were almost Epidemical, 1694, and 1695, at* Rome, *and all over* Italy.

FOR these two last years (I mean 1694, and 1695.) The Apoplexy has sweep'd off great numbers of People both in this City, and all over *Italy*, and the fatal Effects of this Disease were so frequent, that they alarm'd even the Healthful with Apprehensions of sudden Death. The Cause of this Epidemick Apoplexy is justly imputed to the unusual Constitution of the Weather in those years. The Summer of 1693. was so extream hot and scorching, which was follow'd by nipping cold Weather, in the beginning of 1694, and contrary to the Custom of *Italy*, with a rigid Frost, Snow and Ice. *Campania di Roma* and *Puglia*, which are seldom subject to Snow, were then cover'd with it to the Height of a Cubit. The Summer after that was much hotter than the former, insomuch that for five Months together there was no Rain. About the beginning of *October* it began to be wet Weather, and continued such with a Southerly Wind to *April*, 1695, and that to such a Degree that so much Rain was not seen to fall at one time within the Memory of Man. After 15 days of continued Rain, perhaps we had two days clear Weather, which were follow'd by heavier Rains than what went before. After this uncustomary Weather, the above-mentioned Apoplexies display'd their Rage, and perhaps some part of the Epidemick Illness was owing to the Universal Grief and Domestick Care, occasion'd by such calamitous times, all *Europe* being at the same time engag'd in a sharp War, the like of which has scarce been heard of since the Foundations of the Universe were laid. So many Cities were raz'd and burnt, so many thousands of Men slain, all Commerce disturb'd, and the Avenues of Peace block'd up, that the strongest Heart could scarce bear the Thoughts of it.

Further, these Epidemical Apoplexies might be in some measure promoted by the malignant Steams rais'd by so many Earthquakes, as *Italy* has felt from the year 1687, to this very day. And *Seneca* is of the same mind that Apoplexies may proceed from such Subterraneous Vapours. See his *Nat. Quæst. cap.* 27. *Naples* sustain'd the first Shock in 1687, but without any considerable Damage. It felt another Shock in *June* 1688, which not only shatter'd many Houses in the City, but levell'd with the Ground many adjacent Towns. At the same time *Benevento* was almost bury'd in rubbish. The insuing years, several Towns of *Italy* trembled with Earthquakes; particularly *Armino* and *Ancona*, two Towns upon the Coast of the Adriatick Sea in the Territories of the Pope, which sustain'd considerable Damage the last year; *Calabria* and *Sicily* were visited, and the fine City of *Catania* was bury'd in Ruins, so that at this day there is nothing of it to be seen. *Messana* had several Houses shatter'd, and a great many Towns in *Sicily* were quite over-turn'd. This year the Earthquake was felt at *Venice* and *Padua* and the adjacent Towns. The very last *June* (of the year I now write in, *viz.* 1695. *Bagnorea* a City of St. *Peter's* Patrimony, standing at the distance of 50 miles from *Rome*, was quite laid altogether in Ruines by an Earthquake; and some Shocks were felt in the neighbouring Towns especially *Viterbo*: the Earth open'd in several places, and the best part of ten Towns were bury'd. Nay all *Europe* was sensible of the Shock of the Earthquakes of these years. In 1691, the Plague invaded *Puglia*, and swept off great numbers of the Inhabitants: And some places were pinch'd with Famine. These and such other Accidents usher'd in the fatal Apoplexies that rage still to this *December* 1695, in which I write. 'Tis needless to insist on the Cure of Apoplexies in General, in regard I have treated of that Subject above in the first Book of my *Practice*, *chap.* 9. §. *Of Apoplexies*. Besides, I design to speak more particularly to that Head in a peculiar Treatise that must shortly see the Light.

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